Drug & Cosmetic INDUSTRY

DECEMBER 1940

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The Drug and Cosmetic Industry is published monthly by Drug Markets, Inc., Frazer V. Sinclair, President and Treasurer; Thomas R. Farrell, Vice-president and Secretary. Publication Address, 28 Renne Ave., Pittsfield, Mass., U. S. A. Editorial and General Office, 101 West 31st St., New York, N. Y., U. S. A.

Subscription price—$2.00 a year, in advance, Foreign Countries, $3.00. Single copies, 25¢; Back issues 50¢. Entered as Second Class Matter, January 1, 1928, at the Post Office at Pittsfield, Mass., under the Act of March 3, 1879.

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THOMAS R. FARRELL, Editor
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FRANCIS CHILSON, Production Editor
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HILDA C. McCOLLOM, Art Director
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is Mighty Important in *Cosmetics* too

SAME SIZE and shape, same color and design—that's the uniformity you look for in a deck of cards, and it's "reach for your gun, pardner," if it isn't there!

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Let your local Standard Oil (Indiana) office fill your needs and you'll *insure* the uniform product-quality that modern women just naturally expect.

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Manufacturers of Aromatic Chemicals, Natural Derivatives, Perfume Oils, Artificial Flower and Flavor Oils

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To score consistently with the public, a good product must be uniform.

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If you are using our perfumes you may rest assured that each shipment is just the same as the last. Strict accuracy in filling orders is not only a hard and fast rule with us, it is a habit.

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MAY AN ERA OF *Peace*

AND *Good Will* TOWARD MEN

RETURN TO THE EARTH

In the meantime our every effort will be bent toward maintaining our operations on as nearly a normal basis as possible.

NEW DOMESTIC PRODUCTION OF INDOL

Our laboratories have now produced Indol in this country, and we can offer a fine grade of this material produced from the ground up, in our laboratories, which will assure the users of an uninterrupted supply of this important aromatic chemical.

We wish you all a Hopeful Christmas and a very Happy New Year.

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170 VARICK ST., NEW YORK
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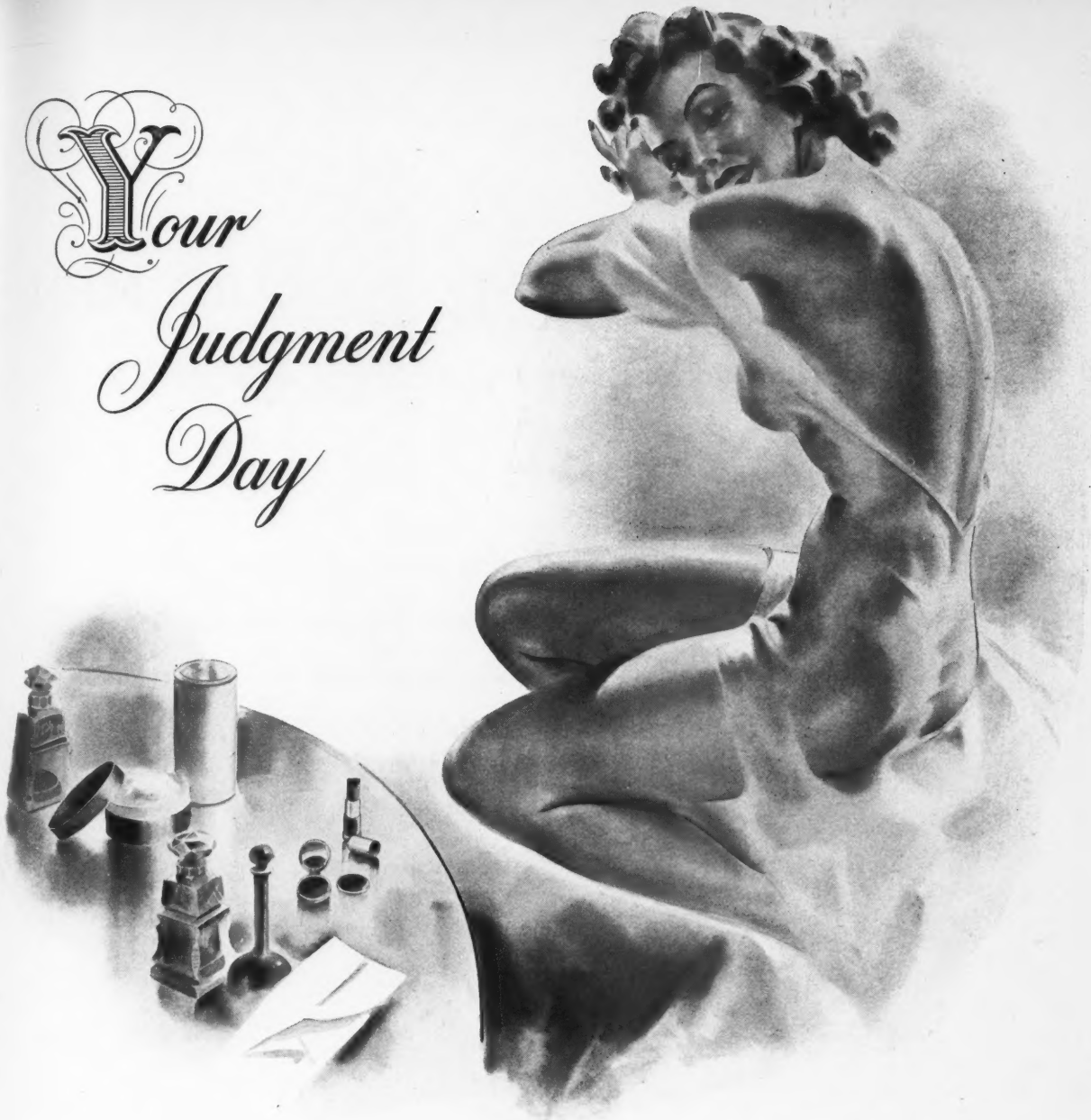

Your Judgment Day

Your *Judgment Day* comes, not once in an Eternity, but every day—in my lady's boudoir. Through her discriminating use, your cosmetics and toiletries will be *judged.* They will not be found lacking in flattering color, seductive fragrance, enhancing formula, or smart packaging, if you have them manufactured by Allied.

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PLANT AND LABORATORIES: SUFFERN, NEW YORK

NOEL...

To our customers in this country we offer our sincere thanks and appreciation for the generous patronage accorded our products, and we extend to our many friends best good wishes for a happy and successful New Year.

To our foreign suppliers and friends overseas, who have been drawn into the maelstrom of the war, we extend our deepest sympathy and we send them a message of hope —— hope for a just and lasting peace and international good will.

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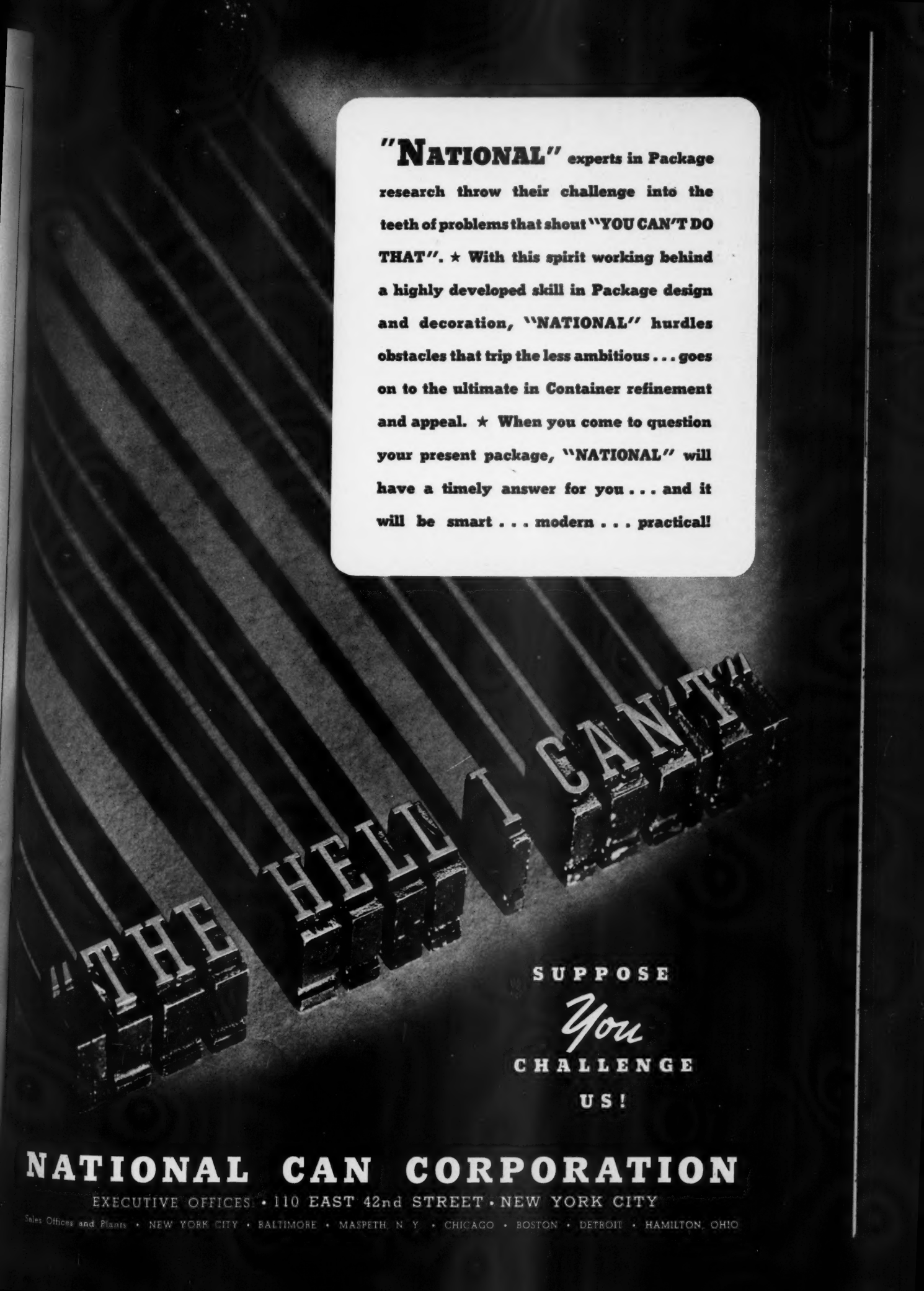
440 W. WASHINGTON STREET, CHICAGO, ILL. • H. M. ROYAL, Inc., 4814 LOMA VISTA, LOS ANGELES, CALIF.


"NATIONAL" experts in Package research throw their challenge into the teeth of problems that shout "YOU CAN'T DO THAT". ★ With this spirit working behind a highly developed skill in Package design and decoration, "NATIONAL" hurdles obstacles that trip the less ambitious . . . goes on to the ultimate in Container refinement and appeal. ★ When you come to question your present package, "NATIONAL" will have a timely answer for you . . . and it will be smart . . . modern . . . practical!
"THE HELL I CAN'T"
SUPPOSE
You
CHALLENGE
US!
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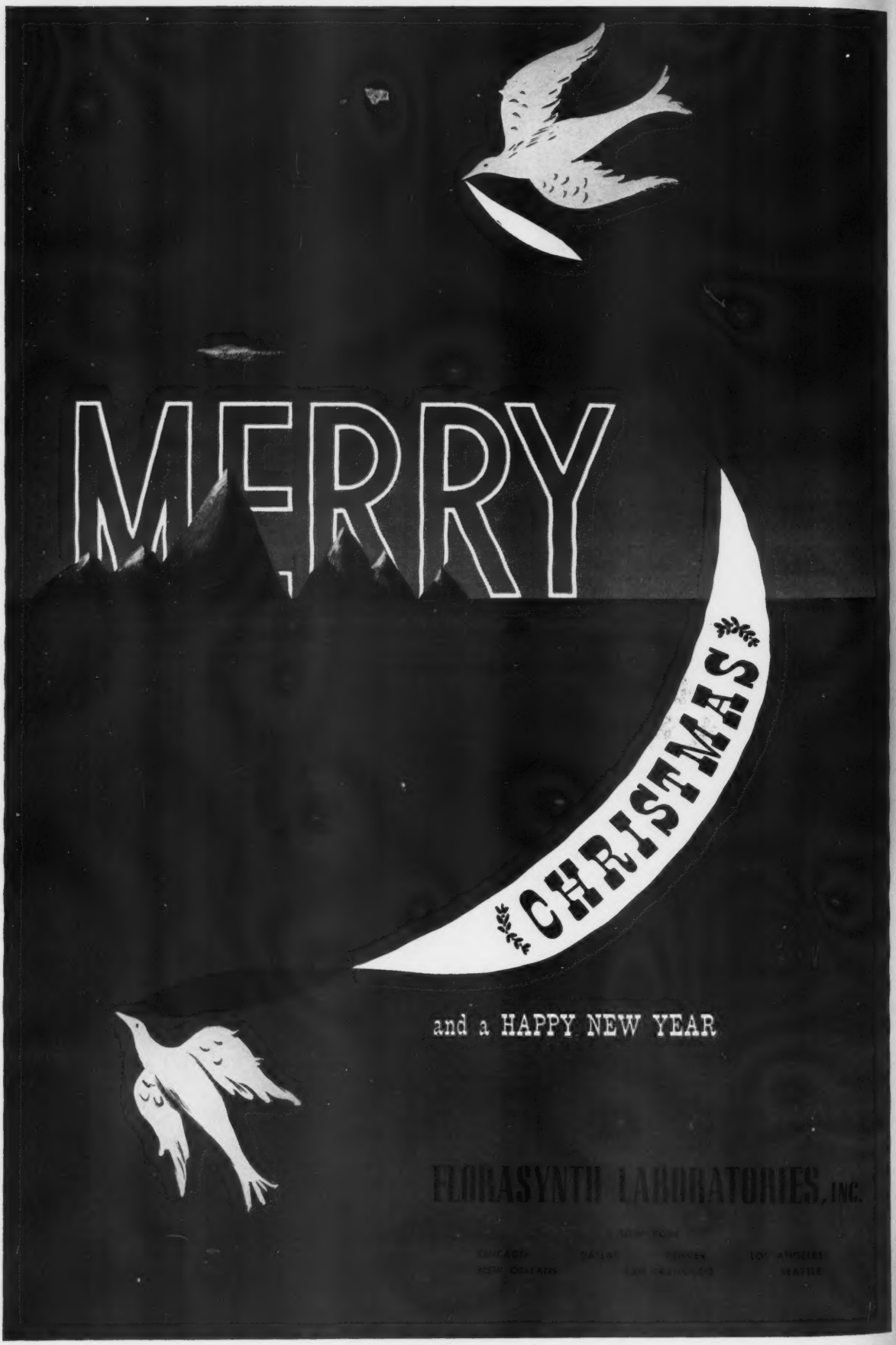

MERRY
CHRISTMAS
and a HAPPY NEW YEAR
FLORASYNTH LABORATORIES, INC.

CAPS

by

VICTOR

MOULDING DIVISION

VICTOR METAL PRODUCTS CORPORATION

200 DIAMOND STREET BROOKLYN • NEW YORK

CAPS BY VICTOR

KING DESIGN

ALL G. C. A. SIZES

The color in which this cap is shown on other side of page is

VICTOR BLUE 26A

Prompt deliveries on black caps from large stocks.

ACE DESIGN

ALL POPULAR SIZES

The color in which this cap is shown on other side of page is

VICTOR BLUE 28

Requests for samples and prices will receive prompt attention.

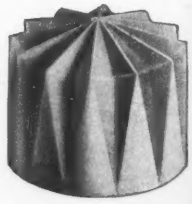
BALL CAP

10-425 – 18-410

The color in which this cap is shown on other side of page is

VICTOR GREEN 5A

All inquiries, regardless of size, will receive prompt attention.



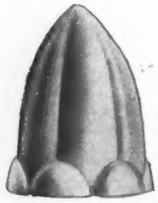
DESIGN No. 70

8-425 – 10-425 – 20-410

The color in which this cap is shown on other side of page is

VICTOR GREEN 23

An example of Victor designing.



DESIGN No. 50

8-425 – 10-425

The color in which this cap is shown on other side of page is

VICTOR MAROON 11A

This cap can be supplied with a well for a glass rod.

TASSEL CAP

8-425 – 10-425

The color in which this cap is shown on other side of page is

VICTOR GREEN 4A

Submit your design problems to Victor.

FLAME CAP

8-425

The color in which this cap is shown on other side of page is

VICTOR RED 24

Technical skill developed thru moulding experience assures a satisfactory closure.

DESIGN No. 60

15–425

The color in which this cap is shown on other side of page is

VICTOR RED 2

A large stock of raw materials for all stock color shades, assures short-time deliveries.

The color shades referred to above and many others are shown by 10 m/m Ace design caps mounted on a stock color card. This card will be promptly mailed upon request.

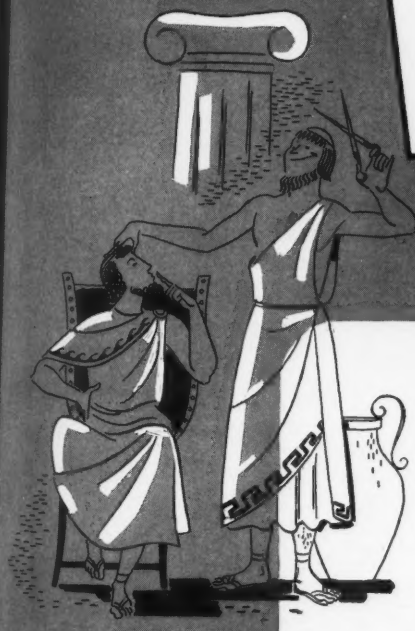
MOULDING DIVISION

VICTOR METAL PRODUCTS CORPORATION

200 DIAMOND STREET **BROOKLYN • NEW YORK**

A prating barber asked Archelaus how he wanted his hair cut. He answered: "In silence."

—PLUTARCH



The new trends in store design and merchandising bring consumer and package face to face. There is no intervening counter — and no salesman to praise or condemn.

Your product is on its own and the consumer's reaction is governed by the story your package tells him. If your sales presentation gets across, the shopper says "I'll buy" and the sale is consummated.

There's a certain art in designing a package that will speak plainly and straightforwardly about a product. It takes experience to master it, and a forward-looking attitude to keep abreast of the day-to-day changes in consumer preference.

We believe our design department has the necessary qualities to create an effective glass package for your product whether it be a cosmetic, food, drug, or household specialty. And our "3-point" service will manufacture it to bring out (1) Beauty, (2) Practicability and (3) Economy.

"3-point" service scores again with this graceful Roman vase for a famous skin balm. Molded rattan design around the base completes the ensemble.

Carr-Lowrey Glass Co.

Factory and Main Office: BALTIMORE, MD.

New York Office: 500 Fifth Avenue • Chicago Office: 1502 Merchandise Mart

BANK ON THESE SAVINGS...

You can bank on savings from on-the-dot delivery service ...experienced understanding of technical problems...efficient cooperation in solving them...profits that come with new products of research—when Cyanamid is your source of supply. Whether you need chemicals or specialties, make Cyanamid your headquarters. Complete lines of the following are available:

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*Trade-mark of American Cyanamid & Chemical Corporation applied to wetting agents of its own manufacture.

**Registered U. S. Patent Office.

From a large private collection comes this amusing nineteenth century mechanical bank called "The Stump Speaker".

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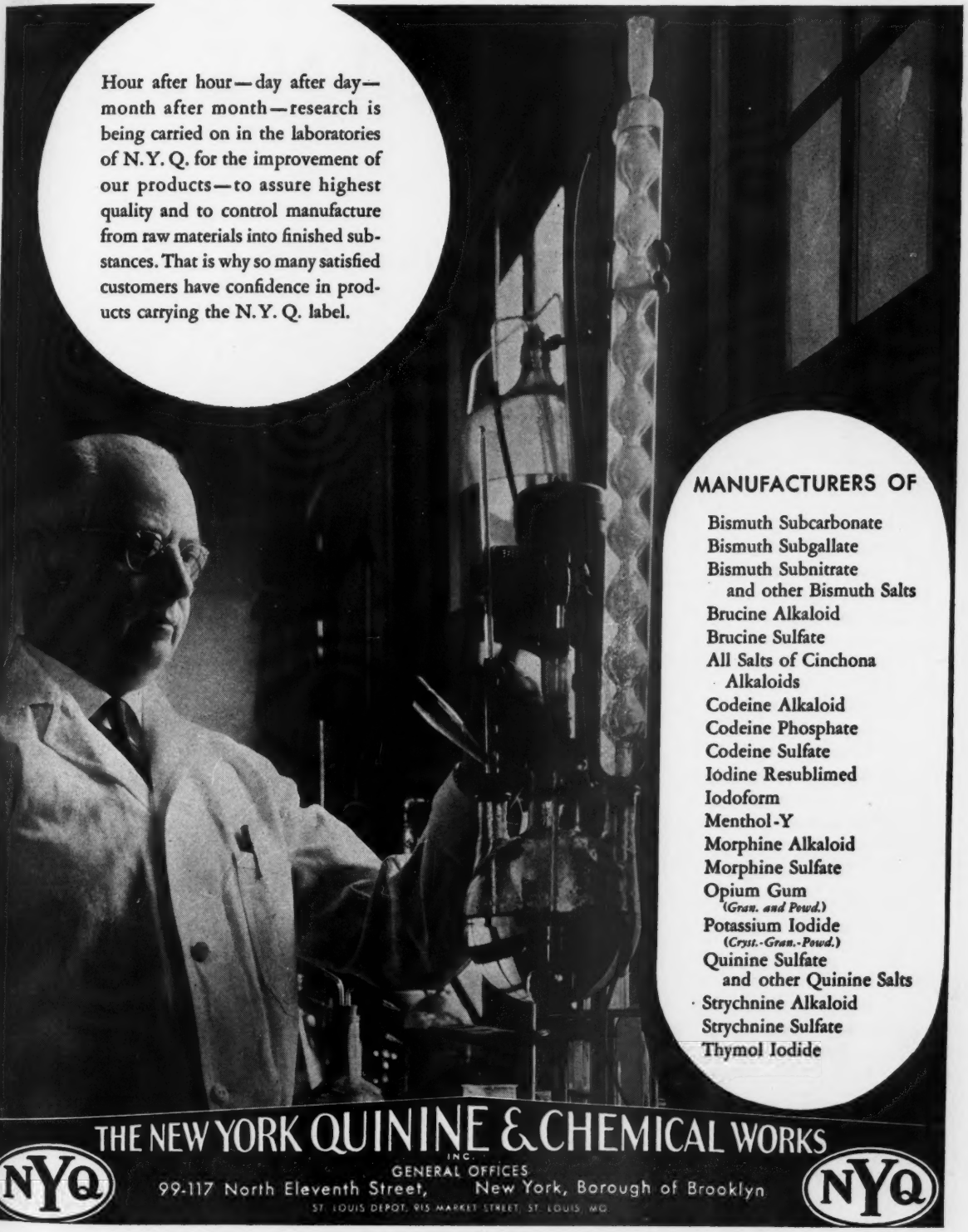
30 ROCKEFELLER PLAZA · NEW YORK, N. Y.

A Unit of American Cyanamid Company

DISTRICT OFFICES: 89 Broad St., Boston, Mass.; 600 S. Delaware Ave., Philadelphia, Pa.; Russell & Bayard Sts., Baltimore, Md.; 822 W. Morehead Street, Charlotte, N. C.; 860 Leader Building, Cleveland, Ohio; 20 N. Wacker Drive, Chicago, Ill.; 2006 Race Street, Kalamazoo, Mich. 931 Fisher Bldg., Detroit, Mich.; 1721 Arcade Bldg., St. Louis, Mo.; Azusa, Cal.

"MAN-HOURS OF RESEARCH"...

Do you realize how many are spent in the constant improvement of N. Y. Q. products?



Hour after hour—day after day—month after month—research is being carried on in the laboratories of N. Y. Q. for the improvement of our products—to assure highest quality and to control manufacture from raw materials into finished substances. That is why so many satisfied customers have confidence in products carrying the N. Y. Q. label.

MANUFACTURERS OF

Bismuth Subcarbonate
Bismuth Subgallate
Bismuth Subnitrate
and other Bismuth Salts
Brucine Alkaloid
Brucine Sulfate
All Salts of Cinchona Alkaloids
Codeine Alkaloid
Codeine Phosphate
Codeine Sulfate
Iodine Resublimed
Iodoform
Menthol-Y
Morphine Alkaloid
Morphine Sulfate
Opium Gum (*Gran. and Powd.*)
Potassium Iodide (*Cryst.-Gran.-Powd.*)
Quinine Sulfate
and other Quinine Salts
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Strychnine Sulfate
Thymol Iodide

THE NEW YORK QUININE & CHEMICAL WORKS INC.

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135 COMMISSIONERS ST., WEST, MONTREAL
ENGLAND: 17 CREECHURCH LANE, LEADENHALL ST., LONDON, E. C. 3

Radiance
LIPSTICK

"Judge a man by the company he keeps" —*just as women judge a lipstick by the* COLOR *it keeps.*

And they *do* judge a lipstick by the color it keeps, just as they continually note its stay-on qualities, its non-greasy appearance and its "sweat-proof" characteristics.

All are important reasons why women *repeatedly* buy *Radiance* Lipstick wherever it is sold. All are reasons why you should see the unique glow of *Radiance* Lipstick—that you may compare it with others.

Certainly! *Radiance* Lipstick is made with Certified Colors and is fully protected by Product Liability Insurance.

Other HELFRICH products include: **All types of Powders, Creams and Lotions. Rouge and Powder Compacts. Creme Rouge, Eye Shadow and Cosmetique.**

WE MAKE PRIVATE BRAND COSMETICS EXCLUSIVELY.

WE DO NOT COMPETE WITH OUR CUSTOMERS.

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LABORATORIES

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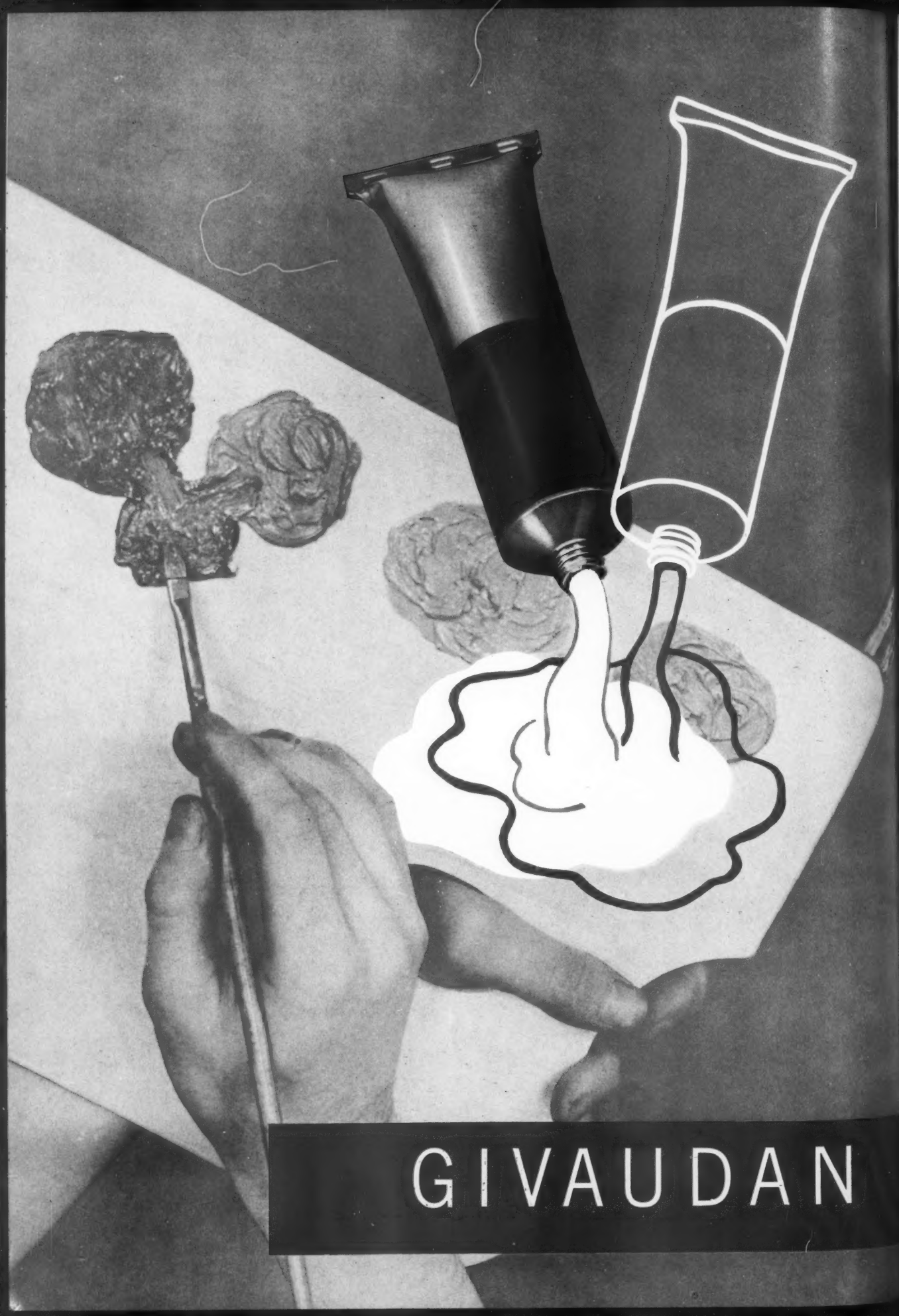
HELFRICH LABORATORIES OF CANADA, LTD., 690 KING ST. W., TORONTO, ONT.
CABLE ADDRESS: HELFLABS, NEW YORK . . . . . CHICAGO . . . . . TORONTO
BALDWIN & BALDWIN, 819 SANTEE STREET, LOS ANGELES, CALIF.
CHARLES H. CURRY, 420 MARKET STREET, SAN FRANCISCO, CALIF.


GIVAUDAN

THE GIFT OF SUCCESSFUL BLENDING

Just as the artist blends many colors to obtain a single outstanding effect, so does the perfume chemist blend odors to create a product with a unique and magnetic appeal. And, as with the artist, his success depends not only on his training and knowledge but also on his gift for sensing the right odors to be used – his "feeling" for the materials with which he works.

Givaudan's staff has demonstrated its ability to create new and unusual odors that meet popular demands in timely, effective ready-to-use compounds for perfumes, toilet waters, colognes, for powders, creams, lipsticks, for complete lines of cosmetics and for specially prepared products. Their success in the development of popular odors has been so outstanding that many leading perfumes and cosmetics on the market today are based on Givaudan products. Givaudan's knowledge of materials and special methods of producing them contributes constantly to economy in production and results in merchandising.

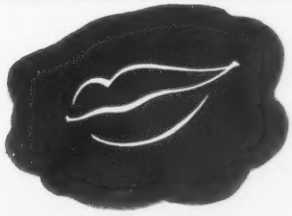
If you are considering adapting your lines to changing trends – in seasons or fashions – we invite you to call upon the experience and "blending gifts" of our staff. Outline your problem and ask us for suggestions. Samples of odors and specialties will be sent on request.

HIGHLIGHT OF THE MONTH

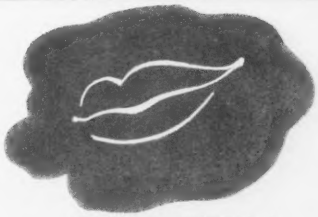
BROMOSOLV

Bromosolv is a 4% *solution* of tetra-brom fluorescein, the halogenated fluorescein most widely used in lipsticks for indelibility.

Bromosolv is new and revolutionary because it provides the lipstick manufacturer with a higher concentration of tetra-brom fluorescein in *solution* than has been available before. Because this coloring material is in *solution* it is more completely dispersed in the lipstick. This produces a color intensity approximately four times that of tetra-brom fluorescein dispersed *in ordinary vehicles* such as castor oil. Likewise, *permanency of color* is increased in direct proportion.



BROMOSOLV SAMPLE



CONTROL SAMPLE

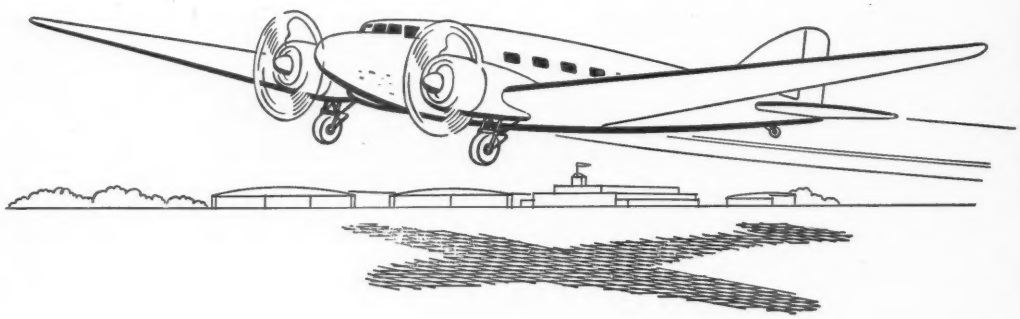
Examples of the color intensity developed by the same percentages of tetra-brom fluorescein in two lipsticks are shown above. In the BROMOSOLV SAMPLE, 2% of tetra-brom fluorescein is secured through use of 50% of Bromosolv in the formula. In the CONTROL SAMPLE the same amount (2%) of tetra-brom fluorescein is dispersed in castor oil.

Details of interesting tests on Bromosolv, together with full information concerning its use, will be supplied promptly on request.

DELAWANNA, INC.

330 WEST 42ND STREET, NEW YORK, N. Y.

THE TAKE-OFF IS THE TIP-OFF



A good, smooth take-off, and you're confident of the pilot and plane. A bad, bumpy take-off, and you wonder!

"Take-off" also affects the consumer's attitude toward your product. If the cap comes off your container smoothly and easily, her reaction is favorable. If it has to be wrestled off, milady gets irritated—not only with the cap, but with your product, with you.

Make sure of a good "take-off" reaction by using a seal that *always* comes off easily—an Alseco R-O Seal. R-O's are never wedged or cocked, for they are tailor-fitted to each individual bottle, "min" or "max." Threads are Rolled-On after the seal is squarely in place. Each container is the pattern for its own seal. This also means protection against leakage and evaporation. The user gets full quantity, full strength, full value.

AT YOUR SERVICE: 26 YEARS OF EXPERIENCE BUILDING QUALITY SEALS AND SEALING MACHINES TO FIT THE NEEDS OF THE USER.

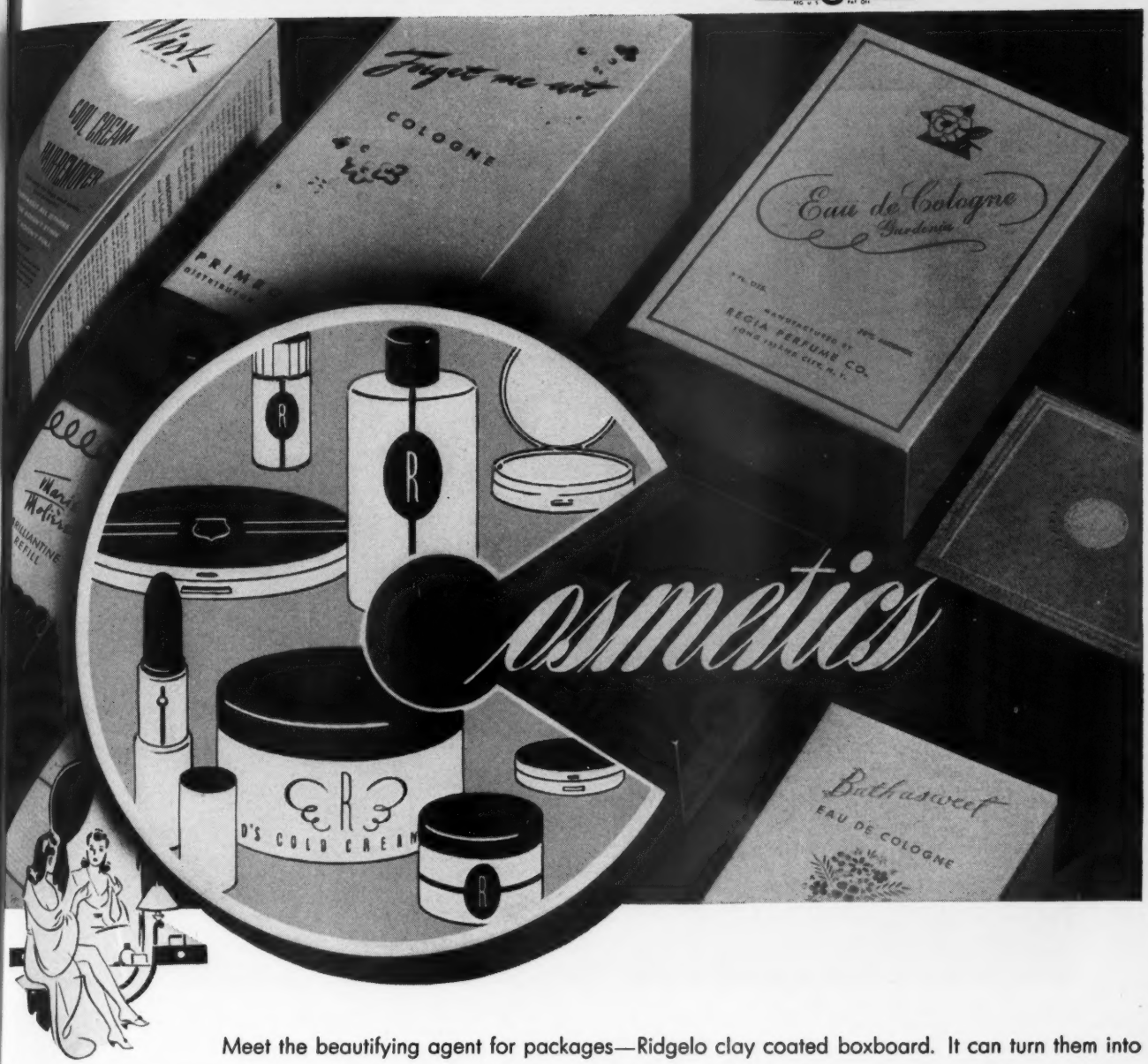
TAILOR - MADE

Alseco Seals

Trade Mark Reg U. S. Pat. Off.

FOR FURTHER DETAILS, WRITE ALUMINUM SEAL COMPANY, 1323 THIRD AVE., NEW KENSINGTON, PENNSYLVANIA.

INDUSTRIES THAT PROFIT FROM Ridgelo CLAY COATED SERVICE..

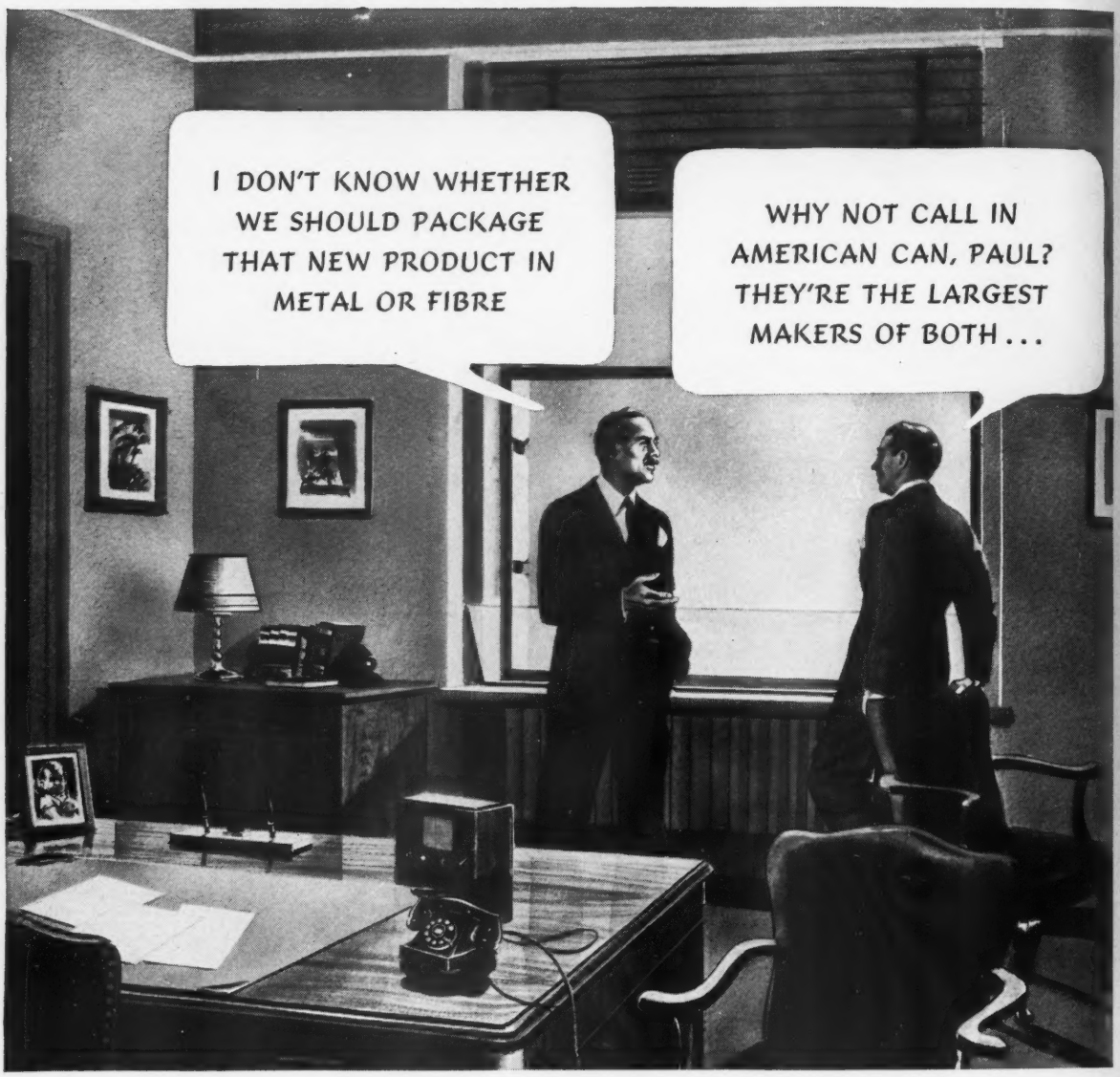


Meet the beautifying agent for packages—Ridgelo clay coated boxboard. It can turn them into glistening, lustrous forms, rich, leather-like beauties, or delicate, color-fast enclosures. Never before now could so much be done in making folding cartons distinguished and sales inviting. In Ridgelo both converter and designer find a flexible medium for expression at really low cost. If desired, cartons can match the patterns of other packaging units and give regular shapes to irregular jars, bottles, cans, and what-not.

Perhaps you haven't kept up-to-date on the scope of Ridgelo clay coated—in unusual as well as every-day packaging development. Let your supplier show you samples or have us make them to your specifications—Remember, every good design deserves Ridgelo clay coated—all others need it.

Ridgelo
CLAY COATED
REG. U. S. PAT. OFF.
BOXBOARDS • CARDBOARDS
MADE AT RIDGEFIELD, N. J.
BY LOWE PAPER COMPANY

Representatives: E. C. Collins, Baltimore • Bradner Smith and Company and Mac Sim Bar Paper Company, Chicago • H. B. Royce, Detroit
Gordon Murphy and Norman A. Buist Los Angeles • A E. Kellogg, St Louis • Philip Rudolph & Son, Inc., Philadelphia


I DON'T KNOW WHETHER WE SHOULD PACKAGE THAT NEW PRODUCT IN METAL OR FIBRE
WHY NOT CALL IN AMERICAN CAN, PAUL? THEY'RE THE LARGEST MAKERS OF BOTH . . .

"The way I look at it, the man who has the best perspective is likely to have the soundest judgment. American Can has had the widest experience in both metal and fibre containers. That's important to us. Then, too, they can be unbiased in their judgment, because they make *both*. Either way we go, we'll have the benefits of their research and their resources. Let's study the problem with them."

CANCO

AMERICAN CAN COMPANY, 230 PARK AVENUE, NEW YORK, N. Y.
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"Our new single-application Alcoa Tube with the diaphragm top solves our problem very nicely," says The Wella Corporation of New York, manufacturers of Wella Kolestral Concentrate for hair and scalp. "It is the best means we have discovered to get all beauty operators to use a standard quantity of product in every application. Besides, we find that this Aluminum Tube keeps our product in laboratory condition until it is used."

The "one-shot" tube developed for The Wella Corporation is just one of many styles that are available in Alcoa Aluminum Tubes. Whether your product calls for a single-application tube, or one that will keep your product in good condition through a long period of use, chances are, you'll find the answer in an Alcoa Tube.

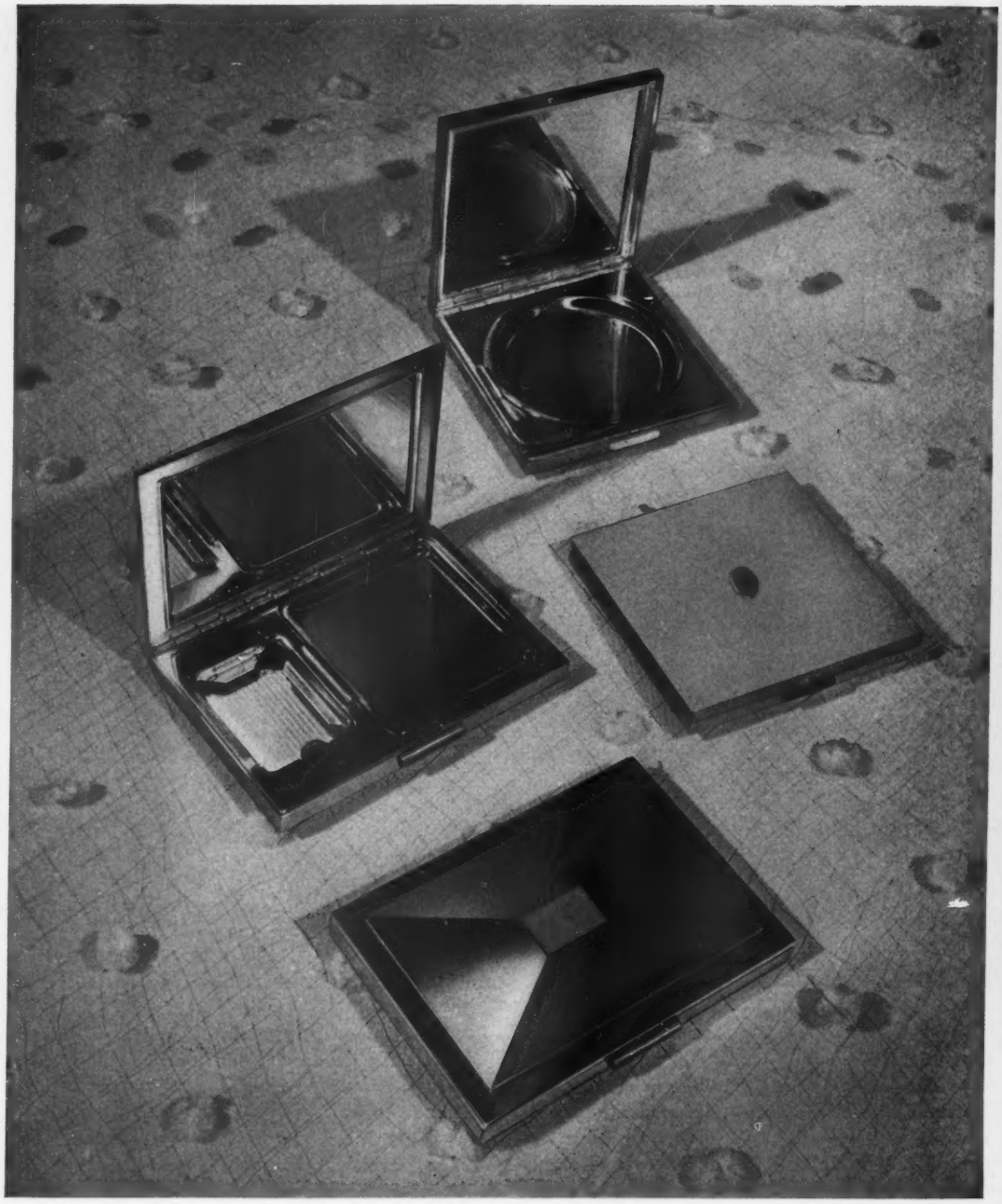
Through the use of special inert interior coatings developed by our laboratory, it is now possible to pack even acid and alkaline products in Alcoa Aluminum Tubes. This means that virtually every tube user, regardless of the ingredients of his product, can take advantage of the strength, lightness, beauty, and economy of Aluminum Tubes. ALUMINUM COMPANY OF AMERICA, 1913 Gulf Building, Pittsburgh, Pa.

PACK *Safely* IN PURE

ALCOA ALUMINUM TUBES

EYEBROW PENCIL HOLDERS • BOTTLE CAPS • JAR CAPS • METAL NOVELTIES TO INDIVIDUAL REQUIREMENTS

VANITY CASES • ROUGE CASES • PASTE ROUGE CONTAINERS • LIPSTICK HOLDERS (ALL TYPES) POWDER BOX CONTAINERS



Vanities BY BRIDGEPORT

Bridgeport compact cases and vanities are outstanding for style and craftsmanship. Vanities such as these can be produced to specification to harmonize with any cosmetic line or color scheme. . . . . .

BRIDGEPORT METAL GOODS MFG. CO.

BRIDGEPORT, CONN. Phone Bridgeport 3-3125 ESTABLISHED 1909

FOR
EVER-
WIDENING
USES...

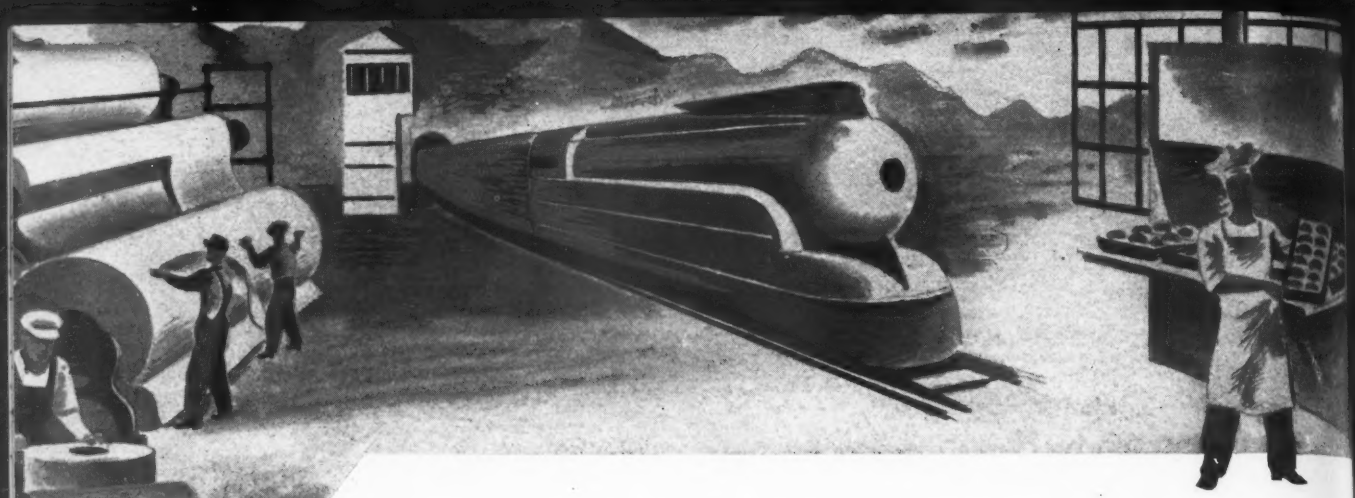
...to Cosmetics!

EVEN we who market petroleum never cease to marvel at its amazing versatility.

It would seem almost enough for any product to give us light, power, heat, lubricants, a whole array of bright new plastics, synthetic rubbers, all sorts of waxes and countless pharmaceuticals.

But these are only the commonly known uses of oil. For the magic of science converts this treasure of the earth into ever-widening uses...into oils so delicate for beauty...and oils so tough for industry.

With the growth of petroleum for this variety of uses, the name Alliance is climbing into prominence. Its vast knowledge of oils, its ability to select oils with correct characteristics for each manufacturer's requirements, its dependability for purity and uniformity...have led company after company, who want to reap the riches and economies of petroleum, to turn to Alliance.



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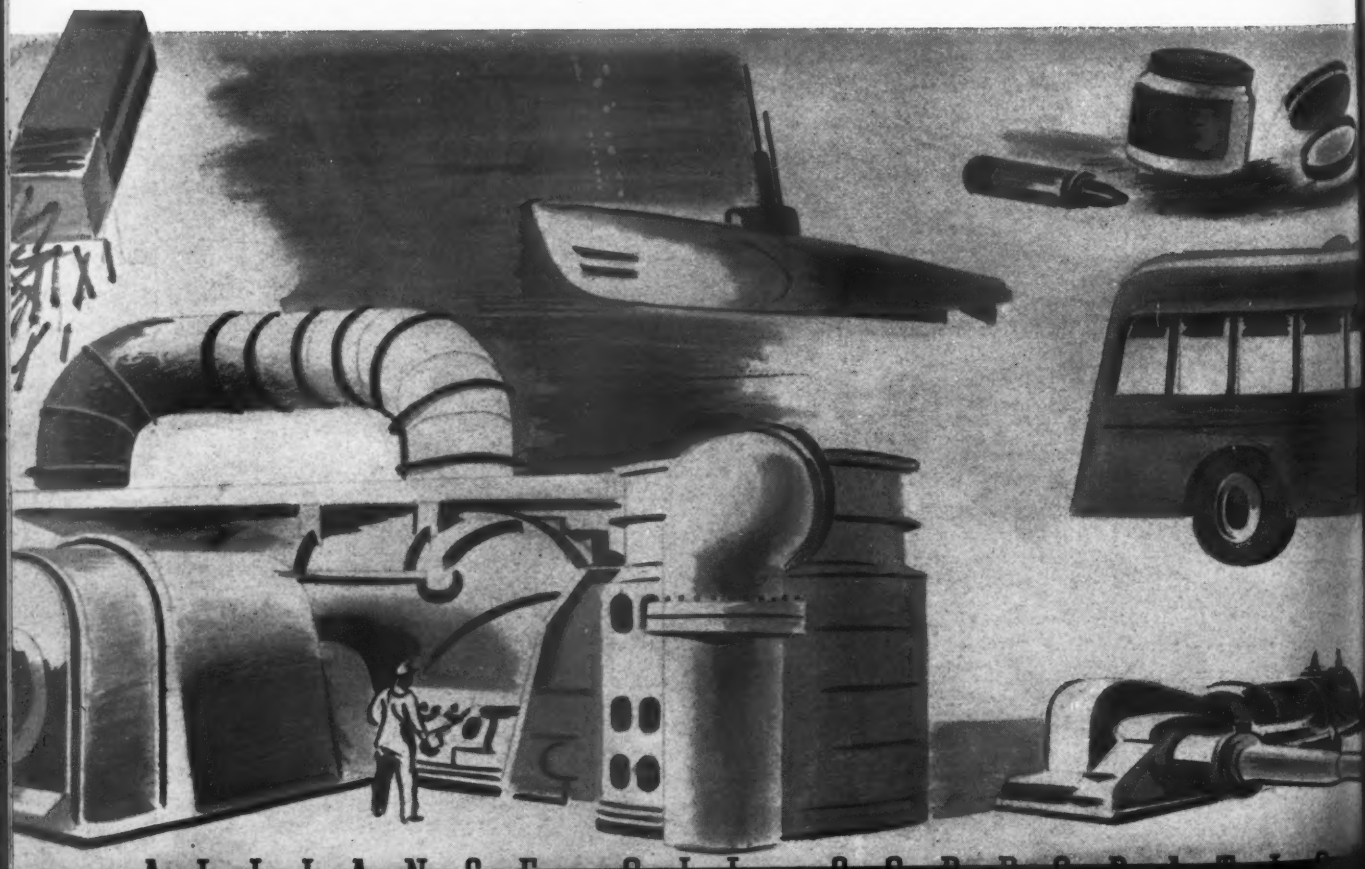
STEAM CYLINDER OILS • TECHNICAL WHITE OILS



ALLIANCE OIL CORPORATION

ESSENTIAL OILS
and
PERFUMER'S RAW MATERIALS
SYNTHESIZED
by
DREYER

In view of the shortage now prevailing on all natural materials, from France, Northern African and most European countries, our laboratory has developed a number of very interesting synthetics.

OIL LAVENDER FLOWERS
SYNTHETIC

Price **$3.25** *per lb.*

A chemically treated Natural Oil which produces a product very closely resembling the natural material.

CIVET SYNTHETIC POWDER

Price **$12.00** *per lb.*

Only 1/2 ounce necessary to make 1 gallon of Tincture equal to a Natural Tincture of 4 ounces to the gallon. A saving of over $45.00 on each gallon. Extremely close in odor value to the natural. Will not discolor.

OIL CANANGA
SYNTHETIC

Price **$2.00** *per lb.*

An excellent substitute for the Natural Oil. Send for Sample.

BERGAMOL

Price **$3.00** *per lb.*

Made from available natural materials, chemically treated. It is perhaps the closest to the Natural Oil Bergamot as yet developed.

OIL GERANIUM
SYNTHETIC

Price **$5.00** *per lb.*

A very fine reproduction of the odor of Natural Oil Geranium African. An excellent substitute. May be used either alone or in conjunction with Natural Oil.

OIL YLANG YLANG
SYNTHETIC

Price **$2.75** *per lb.*

Delicacy and Fidelity to the odor of Natural Oil.

DREYER

P. R. DREYER INC.

DREYER

119 WEST 19th STREET

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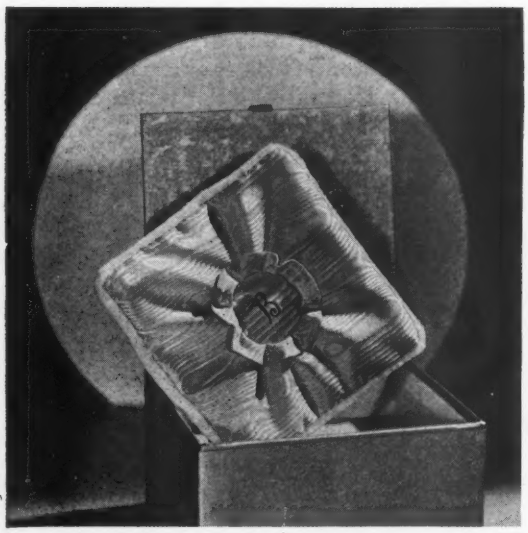
Service ... TO THE TRADE EXCLUSIVELY

LIPSTICKS	COMPACTS: ROUGE POWDER
CREAM ROUGES	EYE SHADOWS
EYEBROW PENCILS	WATERPROOF MASCARAS
CREAMS	LOTIONS
TOILET WATERS	FACE POWDERS

ALL OXZYN products are checked by experienced chemists, to insure absolute compliance with the Pure Food, Drug and Cosmetic Act.



The NEW Five-Color Puff, available in all standard sizes, adds to the attractiveness of your box and the appeal of your product. Patent Nos. 1,813,518; 2,221,120.

Ask today for your free sample of the new Five-Color Puff, wholly machine made—yet having the appearance of a hand made product. Your request will involve no obligation whatever.

OXZYN SALES COMPANY

New Jersey Office: 1 Pleasant Ave., Clifton — Canadian Office: 144 Front St., W., Toronto
Phone Passaic 2-6900

WHOLESALE DISTRIBUTORS OF *Cosmetics of Quality* MANUFACTURED BY OXZYN COMPANY

Synfleur

REG. U. S. PAT. OFF.

JASMINE D'ESPAGNE-A

The scarcity of natural Jasmine has prompted perfumers to search for products reproducing the delicate odor of the flowers. **JASMINE D'ESPAGNE-A** is a worthy reproduction of natural Jasmine. Adapted for creams, powders and extracts.

Pounds, $12.00

Also available in three inexpensive grades—

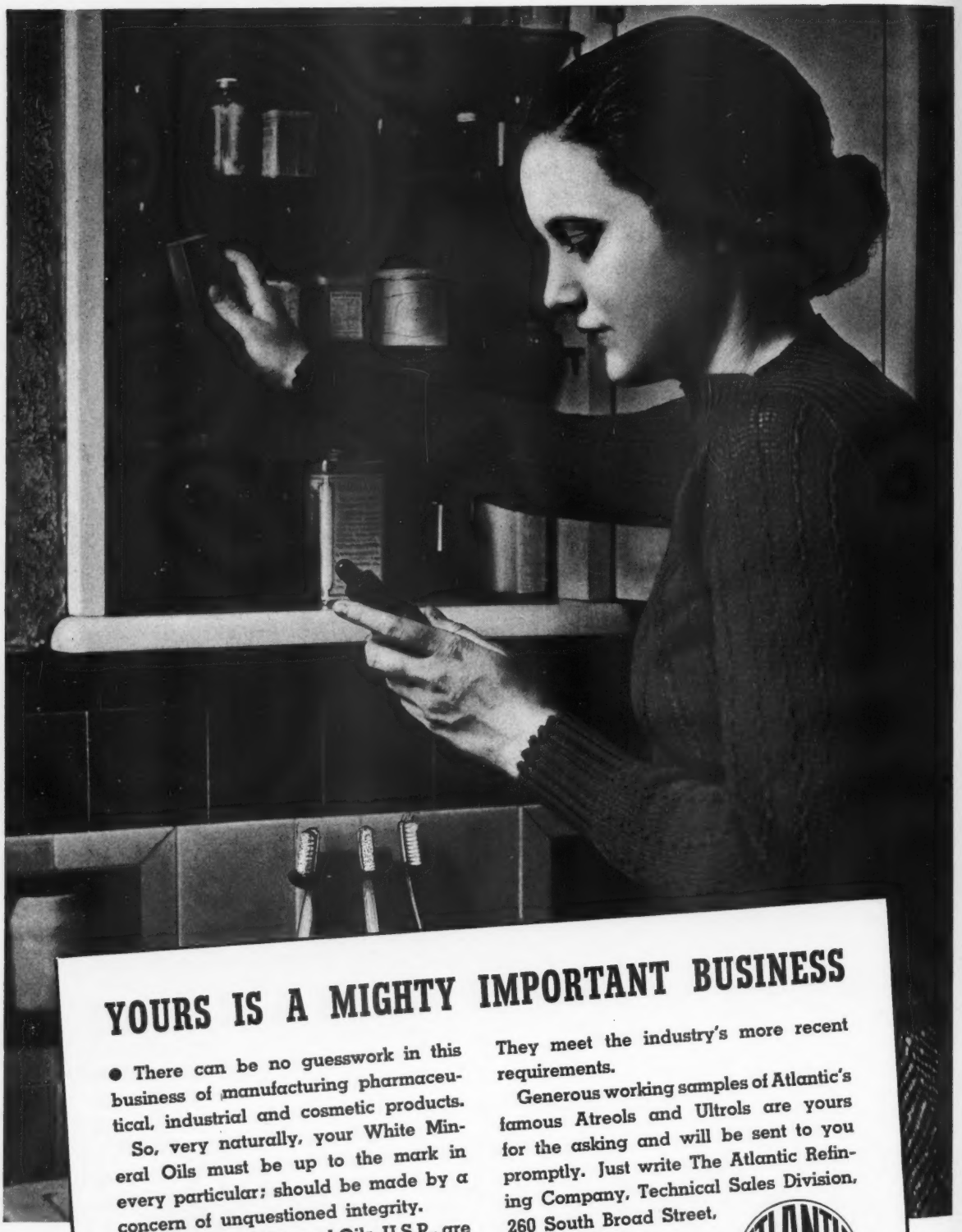
Jasmine d'Espagne 77 ($7.50 lb.), **Jasmine d'Espagne-S** ($4.50 lb.) and **Jasmine d'Espagne-T** ($2.50 lb.)

Samples upon request.

SYNFLEUR SCIENTIFIC LABORATORIES, INC.
MONTICELLO, NEW YORK

also

New York **Atlanta** **Chicago** **Detroit**
Mexico, D. F. **Buenos Aires** **Rio de Janiero** **Havana**



YOURS IS A MIGHTY IMPORTANT BUSINESS

● There can be no guesswork in this business of manufacturing pharmaceutical, industrial and cosmetic products.

So, very naturally, your White Mineral Oils must be up to the mark in every particular; should be made by a concern of unquestioned integrity.

Atlantic White Mineral Oils, U.S.P., are uniform and pure. They are priced right. They meet the industry's more recent requirements.

Generous working samples of Atlantic's famous Atreols and Ultrols are yours for the asking and will be sent to you promptly. Just write The Atlantic Refining Company, Technical Sales Division, 260 South Broad Street, Philadelphia, Penna.

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THE ATLANTIC REFINING COMPANY
PHILADELPHIA, U.S.A.

ATLANTIC WHITE OILS

LIPS THAT SPEAK OF QUALITY

Protect your good name with lipsticks that are famous for uniformity of high quality standards, made by scientific methods under careful supervision. New sales-compelling shades have been developed, that keep abreast of the fashion trends. Ask us to submit samples and prices for your consideration!

PRIVATE LABEL COSMETICS:

LIPSTICK . . . ROUGE . . . FACE POWDER
EYE SHADOW . . . MASCARA . . . BEAUTY AIDS

Products Liability Insurance Carried

PARIS COSMETICS, INC.

116 WEST 14TH STREET, NEW YORK, N. Y.
CABLE: PARISTIC NEW YORK

Make yours th

PACK IN GLASS
FOR GREATER SALES
AND PROFITS

All-Purpose Soda!

PACK IT IN PRACTICAL, INEXPENSIVE *Glass*- IT'S AT HOME IN EVERY SURROUNDING!

● Your soda bicarb sales and profits will soar—if housewives accept your package as "presentable" and practical in every surrounding! Inexpensive GLASS makes just such a package!

In the glittering "glamor" bathroom, your soda in sparkling glass will find a welcome place. In the kitchen, it will take its position alongside the gleaming containers of other cooking necessities. And the sturdiness of glass will make your soda bicarb package a welcome addition to the cleaning closet.

You can hardly expect people to make full use of soda packed in containers that look "cheap", that get wet and soggy, that are hard to open and harder to get a spoon into. But pack it in an Anchor Hocking Glass Container, seal it with an easy-to-open, easy-to-close Anchor Amerseal Cap and the American housewife will use it for all three purposes.

Let us show you how an Anchor Hocking package can help you increase your market, increase your distribution and definitely "up" your profits. Make this test. Send us several samples of your product as it is now packed. We'll repack it—give it a face lifting—by packing it in an attractive, labeled Anchor Hocking Glass Container. No obligation, of course.

ANCHOR HOCKING GLASS CORPORATION
Lancaster, Ohio
Closure Subsidiary: ANCHOR CAP & CLOSURE CORPORATION
Lancaster, Ohio and Toronto, Canada

ANCHOR HOCKING
GLASS CAPS
-an unbeatable combination

Neroli

SYNTHETIC

by Chuit, Naef & Cie.

Among the more prominent natural oils of French origin for which a severe shortage exists in this country is — NEROLI. A complete lack of stocks is imminent!

Why not investigate NEROLI SYNTHETIC NAEF?

Our Neroli Synthetic possesses a delightful and smooth character, equaling the natural oil in these respects and actually exceeding the yield of the latter by about 15 percent.

$47.00 per pound

Firmenich + Co., Inc.

135 FIFTH AVE., NEW YORK

CHICAGO OFFICE: 844 NORTH RUSH STREET

Parade of STOCK Bottles
Drawn up for inspection are eight of the many attractive Swindell bottles that can be supplied from stock, making it possible for you to enjoy the sales advantages of smart packaging without a heavy investment in bottles.
BACK ROW (left to right)
C-39: ½ oz. to 16 oz.
D-62: ½ Dram to 8 oz.
A-273: ¼ oz. to 16 oz.
A-347: 1¼ Dram to 8 oz.
FRONT ROW (left to right)
J-32: ½ oz. to 16 oz.
A-539: ½ oz. to 32 oz.
A-415: 1 oz. to 4 oz.
A-682: ⅛ oz. to 4 oz.
SWINDELL BROS.
BALTIMORE • MARYLAND
Latin American Representative
MR. ROBERTO ORTIZ, HAVANA, CUBA
200 FIFTH AVE
NEW YORK
When you think of bottles think of
Swindell

COSMETIC *and* PERFUME ADVERTISERS

NEED THESE GIRLS!

FOURTEEN THOUSAND OF THEM—meeting the consumers your advertising reaches! Behind toilet goods counters in department stores, drug stores and chain stores, they influence displays, store policy and the whole inclination of the store to work with an advertiser in the ways that multiply the effect of consumer advertising.

These girls are impressionable: advertising can sell them on company policy, the merit of the goods, the strength and consistency of the advertising.

And, believing in the company, the product and the help they are receiving; these girls can do wonders in accelerating the tempo of the whole campaign. Teach them to expect a demand for your product—they will create a surprising amount for you.

BEAUTY FASHION (Toilet Requisites) is read by these girls with the personal, friendly interest they give to *their own* magazine. It represents the best in the industry to them.

The six thousand stores where these girls so largely direct the flow of goods, is the cosmetic and perfume market. Eighty per cent of all cosmetics and perfumes priced over 50c are sold here. The consumer shops here for all the better class toiletries. No consumer advertising campaign can operate efficiently without the help of these stores and these girls.

BEAUTY FASHION (Toilet Requisites) is more than a trade paper. It is a magazine with a circulation and reader interest that the skillful advertiser and merchandiser can use to accomplish traceable results—often startling results.

Put BEAUTY FASHION (Toilet Requisites) first on your list.

STURGE STANDARD
PRECIPITATED CHALK

UNFAILING
UNIFORMITY

UNFAILING
QUALITY

UNFAILING
DELIVERIES

For over FIFTY Years

JOHN & E. STURGE
LIMITED

Distributors:

H. J. BAKER & BRO.
271 Madison Ave. • New York, N. Y.

Greetings from DURLIN!

★

This has been a good Nail Enamel Year — a good DURLIN year.

We at DURLIN believe that the many new advances we have been able to make in producing a better, more saleable nail enamel have helped our customers to a good year.

Better times are coming! Times when our specialized research and intimate contact with the Nail Enamel market will help our customers to even greater business opportunities.

This is our pledge: to work unremittingly to keep our customers ahead of the procession in better, more saleable nail enamel. To these customers and to our friends in the trade, we at DURLIN take this occasion to wish for them a very Merry Christmas and a Prosperous, Happy New Year!

★

THE DURLIN CORPORATION

Producers of The Most Talked About Nail Enamel in The World

11 WEST 42nd STREET **NEW YORK, N. Y.**

CABLE ADDRESS: "Durlin, New York"

★

To our many friends of the industry, in this and in foreign lands, we extend our best wishes for a Merry Christmas and a happy and healthful New Year.

The "New Perfection" Family
Pennsylvania Glass Products Co.
Pittsburgh, Pennsylvania
December 1940

WITH SOME NAMES
AN ASSURANCE OF QUALITY IS

As Good as a Bond

AND to those who have not through long acquaintance been able to confirm the above statement we extend a hearty invitation to try our service—it's convincing.

THE ATLANTIC REFINING CO.
PHILADELPHIA, PA.
260 South Broad Street
Petroleum Products

White Mineral Oils U.S.P. for pharmaceutical and cosmetic uses. All gravities, all viscosities.

H. J. BAKER AND BRO.
NEW YORK

Sturge's English precipitated chalk U.S.P. Extra Light—Dense.

SIERRA TALC CO.
LOS ANGELES, CALIF.

Sierra Talcs approximate the ideal—chemically and physically—and excel in uniformity of milling and color.

THURSTON & BRAIDICH
NEW YORK

Specialties:
Gum Arabic—Gum Karaya—Gum Tragacanth—Vanilla Beans—Tonka Beans.

THE HARKNESS & COWING CO.
CINCINNATI, OHIO

Manufacturers of Stearic Acid Saponification Process.

THEODOR LEONHARD WAX CO.
Established 1852
HALEDON • PATERSON, N. J.

Bleachers & Refiners of Bees-Wax. White Bleached Bees-Wax T. L. Brand. Extra Quality—U.S.P. and 100% pure.

LACO PRODUCTS CO., INC.
BOSTON • BALTIMORE

Manufacturers and Importers
Castile Soap "Laco"
Powdered — "Purls" — Bars

COLGATE-PALMOLIVE-PEET CO.
JERSEY CITY, N. J.
Executive Offices — 105 Hudson St.

Glycerine
Chemically Pure U.S.P. Dynamite

A. C. Drury & Co.
INC.

219 EAST No. WATER STREET CHICAGO, ILL.

MERRY CHRISTMAS

Now, more than ever before, we feel that it is important to remember those traditions and customs that make business pleasant. We wish all of our friends a Merry Christmas and hope that the New Year will be a happy one.

We look forward to continuing in 1941 the personal attention to our customers' needs that has been the tradition of our company for more than seventy years.

FINE CHEMICALS
Mallinckrodt
SINCE 1867

MALLINCKRODT CHEMICAL WORKS

New York **Chicago**
St. Louis **Philadelphia**
Montreal
Toronto

CosmetiChemistry

You might call it cosmetichemistry—the Mallinckrodt manufacture of chemicals to meet the special needs of cosmetic makers. Today, more than ever, the production of toilet goods is a science as well as an art. Knowing this, M.C.W. offers science-built chemicals, fine and pure, and physically *just right*. Bottle users or barrel users—both are assured satisfaction.

Key Chemicals for Quality Cosmetics

- Zinc Sulfocarbolate
- Bismuth Subnitrate
- Zinc Stearate
- Aluminum Sulfocarbolate
- Potassium Sulfite
- Barium Sulfate
- Magnesium Stearate
- Calamine
- Aluminum Chloride

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FINE CHEMICALS

Mallinckrodt

SINCE 1867

THE TREND

THE production of drugs and medicines during 1939 as given out by the Bureau of the Census, show that ethical products are now sold in greater volume than proprietary products. This is not surprising when one considers that the people of this country have become educated in matters of health and now are quite likely to upset the physician with their knowledge. We have spoken of this trend for many years, and we have also indicated that the new Food, Drug, and Cosmetic Act would accelerate it.

THE sharpest increase in any one class of products came, as might be expected, in the vitamin products which advanced forty-eight per cent. Glandular products advanced twenty per cent. in value, as might also be expected. It is in these two fields that most of the advances in medicine are now taking place.

THE widely used sulfanilamide and the related compounds used in chemotherapy had a marked effect upon biologics. For although biologic production increased thirty per cent., this increase was wholly in biologics for animal use, the total of biologics for human use actually showing a slight decline. The animal field is now the largest one for biologics, representing fifty-nine per cent. of the total market. The significant decline in biologics for human use was in anti-toxins which declined by one million dollars,—this is the field in which sulfanilamide and the related products now predominate.

THE amount of drug products produced in this country continues to grow. But the growth is not in all types of products. Furthermore, the methods of promotion of drug products that are most successful have changed materially and are still changing. Manufacturers must watch the trends closely in the industry if they expect to stay in business.

ETHICALS TAKE LEAD

THE ethical branch of the drug industry continues to rise and has now passed the proprietary branch of the industry which is definitely on the decline. The figures released last month by the Bureau of the Census show an increase of twenty-five per cent. in the production of ethical products which rose from $142,335,840 in 1937 to $178,930,487 in 1939. Proprietaries declined from $184,309,381 in 1937 to $166,577,263 in 1939, or a loss of nine per cent. The total of ethical products and proprietaries increased from $326,645,221 in 1937 to $345,507,740 in 1939, and the total for the industry including biologics, drug grinding, and poultry and animal products, increased from $353,853,522 in 1937 to $364,985,404 in 1939. The definition given in the report for ethical products is "drugs and medicines not advertised to the general public, but sold to or prescribed by physicians." And the definition given for what we have termed proprietaries is "drugs and medicines in specially prepared packages, advertised for sale to the general public."

Vitamin products increased forty-eight per cent. from $28,098,510 in 1937 to $41,644,716 in 1939. Ethical vitamin products showed the greatest increase, rising from $13,114,008 in 1937 to $23,230,150 in 1939. Proprietary vitamin products, which were ahead of ethical vitamin products in 1937 with production of $14,984,502, advanced at a slower rate to $18,414,566 in 1939 and fell far behind the ethical vitamins produced in 1939.

The vitamin products produced are mainly non-U. S. P. products. Production of non-U. S. P. vitamin products stood at $20,416,414 in 1937, against $32,424,497 in 1939, while U. S. P. vitamin products stood at $6,682,096 in 1937, against $9,220,219 in 1939. Therefore, non-U. S. P. vitamin products not only held its lead but increased its production over 1937 by fifty-four per cent., against an increase in U. S. P. vitamin products of thirty-eight per cent. In 1937, seventy-five per cent of the vitamin products were non-U. S. P., and in 1939, seventy-seven per cent. of the vitamin products were non-U. S. P.

Glandular products increased twenty per cent. from $15,155,533 in 1937 to $18,215,409 in 1939. Ethical products predominate in this division of medicine, with $16,899,971 for ethicals, against $1,315,438 for proprietaries in 1939. Figures for 1937 were $14,265,870 for ethicals, against $889,663 for proprietaries. However, the percentage increase in proprietary glandular products is interesting, standing at forty-eight per cent., against an increase of only eighteen per cent. for ethical glandular products.

Non-U. S. P. glandular products predominate with totals of $12,151,271 for 1939, and $9,347,576 for 1937, compared with totals for U. S. P. glandular products of $6,064,138 in 1939, and $5,807,957 in 1937. The percentage increase in non-U. S. P. glandular products stands at thirty per cent., against only four per cent. increase for U. S. P. glandular products.

While biologics registered an increase of thirty per cent. from $16,769,864 in 1937, to $21,767,222 in 1939, this increase was completely in biologics for animal use, the products for human use showing a slight loss. The figures for biologics for human use are $9,476,746 for 1937, against $9,426,620 for 1939—a loss of $50,126. Figures for biologics for animal use are $7,293,118 for 1937, against $12,340,602 for 1939. The animal field therefore is now the largest field for biologics since it represents fifty-seven per cent. of the total for 1939, and since the production of biologics for animal use showed an increase of sixty-nine per cent. in 1939 as compared with 1937.

While some increases in production of biologics for human use were registered in 1939 as compared with 1937, production of antoxins was down by a million dollars, probably due to the use of sulfanilamide and similar chemicals which are being used in the place of antitoxins. All other groups of biologics for human use showed increases with the exception of viruses, which showed a decline.

Synthetic chemical medicinals increased twenty-four per cent. from $8,753,168 in 1937, to $11,576,554 in 1939. The greatest increase was in the ethicals which

Census figures show ethical products leading proprietaries which have declined. Vitamins show greatest gain. Hormones also advance. Biologics adversely affected by sulfanilamide.

advanced thirty-four per cent., from $7,922,542 in 1937, to $10,650,192. Proprietaries advanced only twelve per cent. from $830,626 in 1937, to $926,362 in 1939.

Dry preparations, such as pills, tablets, powders, and salts, advanced only two per cent. from $100,128,954 in 1937, to $102,353,994 in 1939. However, ethical dry preparations advanced thirty-three per cent., from $31,412,449 in 1937 to $41,680,328 in 1939, proprietary dry preparations registering a decline of twelve per cent., from $68,716,505 in 1937, to $60,673,666 in 1939.

Liquid preparations, such as tinctures, fluid extracts, sirups, elixirs, solutions, suspensions, declined eleven per cent., from $103,754,177 in 1937, to $92,186,997 in 1939. Ethical liquid preparations showed a decline of three per cent., from $30,942,004 in 1937, to $30,062,245 in 1939, while proprietary liquid preparations showed a decline of fifteen per cent. from $72,812,173 in 1937, to $62,124,752 in 1939.

Ointments, salves, and cerates declined eleven per cent., from $30,139,058 in 1937, to $26,884,522 in 1939. Ethicals advanced eleven per cent., from $5,073,482 in 1937, to $5,636,089 in 1939, while proprietaries declined fifteen per cent., from $25,065,576 in 1937, to $21,248,-433 in 1939.

Pharmaceutical metals and their salts, such as bromides, citrates, and bismuths, declined one per cent., from $3,985,678 in 1937, to $3,940,145 in 1939. Here again ethicals showed a gain, rising forty per cent., from $1,975,342 in 1937, to $2,754,137 in 1939, while proprietaries showed a loss of forty-one per cent., from $2,010,336 in 1937, to $1,186,008 in 1939.

Intramuscular, subcutaneous, and intravenous products, including arsphenamines, showed a gain of eighteen per cent., from $12,239,990 in 1937, to $14,420,207 in 1939.

Drug grinding declined twelve per cent., from $7,-716,721 in 1937, to $6,789,819 in 1939. Poultry and animal remedies, excepting biologics, increased nine per cent., from $8,630,150 in 1937, to $9,445,191 in 1939.

Specific figures on production of some inorganic medicinal chemicals are also given by Bureau of the Census. Production of iodides increased fifty-six per cent. in value, from $793,609 in 1937, to $1,242,005 in 1939. The production of potassium iodide showed a sharp increase in value of seventy-nine per cent., from $599,027 in 1937, to $1,074,653 in 1939, while sodium iodide declined in value by six per cent., from $81,413 in 1937, to $76,463 in 1939. Thymol iodide also showed a decline amounting to twenty-five per cent., the values being $27,919 in 1937, and $20,009 in 1939. The value of other iodides declined by seventeen per cent., from $85,250 in 1937, to $70,880 in 1939. Pounds of potassium iodide produced totaled 612,696 in 1937, against 914,926 in 1939; sodium iodide totaled 42,062 pounds in 1937, against 39,625 pounds in 1939; thymol iodide totaled 8,402 pounds in 1937, against 6,670 pounds in 1939.

Production of citrates increased eight per cent. in value, from $947,701 in 1937, to $1,026,266 in 1939. However, iron and ammonium citrate declined twelve per cent. in value, from $108,413 in 1937, to $94,836 in 1939, and potassium citrate declined twenty-six per cent. in value, from $72,217 in 1937, to $53,681 in 1939. The increase came in "other citrates" which advanced thirteen per cent. in value, from $767,071 in 1937, to $877,749 in 1939. Pounds of iron and ammonium citrate produced totaled 340,863 in 1937, against 280,-263 in 1939, and potassium citrate produced totaled 200,573 pounds in 1937, against 159,420 pounds in 1939.

Production of bismuth subcarbonate advanced twelve per cent. in value, but declined two per cent. in quantity. The figures are 247,609 pounds, valued at $313,426 in 1937, against 241,817 pounds, valued at $352,638 in 1939.

Production of precipitated chalk declined one per cent. in value from $1,667,280 in 1937, to $1,645,707 in 1939. Production in 1937 totaled 71,235 tons, against 70,504 tons in 1939.

Production of sodium bicarbonate advanced six per cent. in value, from $3,606,271 in 1937, to $3,839,018 in 1939. Quantity increased from 142,161 tons in 1937, to 148,610 tons in 1939.

PACKAGING IN PLASTIC

By THORPE W. DEAKERS*

PACKAGING a drug or cosmetic in a plastic container presents a problem and its manifestations may at times be extremely complex. There are two ways that a container may be molded: either by a thermosetting or thermoplastic process. When the thermosetting method is employed, the initial mold cost is generally higher than for a thermoplastic process. On the other hand, the basic material is cheaper. Each method has its advantages. For the most part, a container molded by the thermosetting process is preferable for the general run of cosmetic applications, because it is not likely to be distorted by heat or attacked by the ingredients in the product.

When the manufacturer selects a plastic package for his product, he should make sure that his preparation is compatible with the constituents of the plastic. In other words, it is not enough to determine whether his product is soluble in cellulose acetate, should he contemplate using such a plastic, but he must also find out if his item will react or be dissolved in the container's plasticizer. A few examples will emphasize this point more clearly:

A certain manufacturer decided to package his lipstick in a plastic container. Brief preliminary tests were made and his product was then sent out on the retail market in its new plastic dress. After a short time, he was forced to recall most of his merchandise because his lipstick had lost its perfume and tasted rancid. He had forgotten in his examination to discover if the plastic was compatible with the essential oils contained in the lipstick mass. Moreover, it was proved that his choice of plastic noticeably accelerated rancidification.

Other lipstick manufacturers using the same plastic case were not troubled.

A manufacturer must remember that a plastic package has a vapor pressure, and most frequently this is due to the plasticizer. If the actual preparation, therefore, has a greater affinity for the plasticizer, then this latter chemical will migrate into the product, sometimes with disastrous results. It is not necessary for the product to be in touch with the plastic for this to occur. Indeed the plastic cover of a package can sometimes damage the preparation which in no way touches it. How far this is true is brought out by another incident which the writer has experienced:

A plastic lipstick case was tested and found to be entirely satisfactory as far as the lipstick mass and perfume were concerned. The lipstick case was wrapped in a circular and boxed in a cardboard container, which in turn was covered with a glossy red paper. The whole set-up presented a beautiful job of packaging. A month later, however, it was discovered that the plasticizer in the plastic case had *evaporated* partially through the circular and into the binder of the ink on the red paper. Though it did not apparently affect the plastic lipstick case or the actual lipstick mass, it certainly played havoc with the glossy paper on the outside cardboard package, rendering it sticky and gummy.

Particularly now that the Food, Drug, and Cosmetic Act is in force, special attention should be paid to see that the plasticizer does not migrate through the medium of the label and loosen the binder of the ink. If this happens the ink will smear and the label will be worthless.

Even if a manufacturer observes every possible precaution in marketing a plastic packaged item, his troubles are not over. Take the case of the manufacturer who had a number of his products returned because it appeared as if a fungus growth had developed on the outside of his usually lustrous plastic containers. He was at loss to find the cause for this had happened at only one outlet. Investigation finally disclosed, however, that the plasticizer in one of his competitor's containers liked his plastic better, and had migrated through quite an air space and condensed on the surface of his containers. After his competitor's products were removed from the same showcase, no more trouble was experienced. Of course, one can't always blame the competitor.

These few examples are recounted merely to show how careful a manufacturer must be when a change

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Difficulties to be avoided when cosmetics are packaged in plastics are revealed by Mr. Deakers. Peculiar reactions from lipsticks can cause real trouble.

over is made to the plastic package. Generally speaking thermosetting resins do not give as much trouble as thermoplastic types, but no hard and fast rule can be laid down in either case. Before a definite plastic container is selected, the manufacturer must first determine the water solubility of the plastic; he must assure himself that the dyes in the plastic will not loosen up and be absorbed by the product; he should find out if the dyes in the plastic are toxic; and also inquire as to the possible toxicity of the plasticizer. In many cases, especially when cellulose acetate is used, tricresylphosphate may be the plasticizer. This chemical should not be employed in drug and cosmetic plastic applications.

Some suppliers, it is true, will not divulge the plasticizer that they are employing. It its use is properly protected by patents, however, there should be no reason why they should not cooperate. Most reliable firms are quite willing to tell what plasticizer is being utilized, and may further report on its relative toxicity.

As a rule, cellulose acetate, cellulose acetobutyrate, ethylcellulose, polystyrene, and vinyl resins are most frequently used in thermoplastic molding processes. If the manufacturer's preparation contains a quantity of alcohol, polystyrene will probably be the best choice. If it is made up of a large amount of mineral oil or similar hydrocarbons, cellulose acetate and ethylcellulose are indicated. If the product has a high water content, cellulose acetobutyrate or polystyrene may be employed. When the former is selected, it is generally a good idea to determine if the butyric acid odor develops after a definite time element. For acid and alkaline preparations, polystyrene and vinyl types of plastic are recommended.

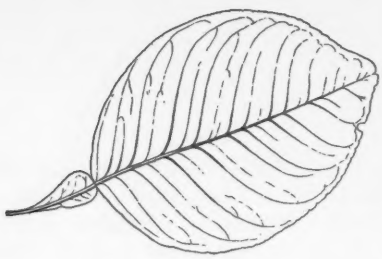
Where thermosetting resins are concerned, the alkyd, urea, and phenolic types are most commonly known. New ones are constantly appearing on the plastic horizon. In general drug and cosmetic practice, however, the ureas are to be preferred; the alkyd resins are frequently sensitive to water, and the phenolic resins, while possessing many excellent characteristics may develop a carbolic odor with the passage of time.

From a practical consideration of the chemical properties and price factor of the thermoplastic and thermosetting types of resin, it may be concluded that the former finds its most advantageous use when the plastic container weighs less than an ounce, and that thermosetting resins are indicated when the container exceeds this figure. Nevertheless the chemical properties of each type of plastic must be carefully considered before a selection of the plastic is made.

Undoubtedly the molder knows more about plastics than the drug or cosmetic manufacturer. Still it must be kept in mind that the latter is much more cognizant of the chemical properties and sales appeal of his product than the fabricator of the plastic package. For this reason the manufacturer should not rely too much on solely the word of the plastic molder, because in the long run it is the manufacturer who pays the bills. Rather the manufacturer should acquaint hinself with the characteristics of various plastic materials and processes, and then work on a cooperative test basis with the firm that is to do his molding. With even a limited knowledge of plastics, the manufacturer will find himself in a better position to conduct his tests more thoroughly. Besides in most plastic processes, there are a number of variables: There is the unknown factor of the composition of the plastic material, and there is the unknown factor of the composition of the product to be packaged. For example, how many manufacturers know what essential oils are actually in the perfume they use?—And as far as the compatibility of a plastic packaged cosmetic goes, the perfume is generally the worst offender.

Although the tone of this article concerning the use of plastics in the drug and cosmetic field has been rather apprehensive, no such purpose was intended. It was felt that a more constructive effect could be achieved if the manufacturer were informed of some of the difficulties which might possibly arise in changing over to the plastic container. It was assumed that he knew of the advantages and good features of the plastic package

(*Continued on page 672*)



OIL OF PETITGRAIN

PARAGUAY

A SURVEY

By DR. ERNEST S. GUENTHER
Chief Research Chemist, Fritzsche Brothers, Inc., New York

A TRAVELER, setting out from Asuncion, Paraguay's capital, and riding across rolling hills and verdant plains covered by dense brush or vast forests, will in his memory always retain a few outstanding impressions. First, the poor roads which turn into mud traps for cars during periods of rain, so that one must resort to horses or ox-drawn carts which plod slowly but steadily through rain and mire. He will also remember the abundance of orange fruit which grows luxuriantly along the roadside, in the gardens of Asuncion's mansions or around humble thatched huts far out in the pampas. Golden jets of orange, illuminated by the sun's rays, flash through the greenery of dense jungles and oranges seem to be present everywhere. Much of the fruit goes to waste, falling from the trees and rotting along the roads, in yards and gardens. Paraguay could probably supply enormous quantities of oranges, provided the fruit could be transported from the interior to a shipping port.

The sweet orange tree, the Spanish "naranja dulce"—*Citrus aurantium* L., subspec. *sinensis*—was very probably introduced to Paraguay by early Spanish missionaries who colonized that country during the Seventeenth and Eighteenth Centuries and brought it to great prosperity. The dictator, Lopez, who ruled Paraguay in the second part of the Nineteenth Century, followed the work of the Jesuits and ordered orange trees planted along the roads. These trees, which can be seen throughout the countryside, are now grown to impressive heights and bear abundant fruit.

Together with the sweet orange, the early Jesuit missionaries and colonizers very likely brought from Spain also the bitter orange—*Citrus aurantium* L., subspec. *amara* L. (*C. bigaradia* Risso)—which, be-

On the opposite page is shown the orange tree which is widely distributed throughout Paraguay, very often around the houses or huts of the natives. Shown also on the opposite page is the condition of the roads in Paraguay during the rainy season when only ox-carts can get through. At the left on this page, and directly below, are shown Petitgrain plantings in Paraguay. In the circle is shown a typical Paraguayan homestead out in the open country. At the bottom of the page is shown the cutting of Petitgrain leaf material with machetes. The structure of the petitgrain leaf is shown in the drawing on the opposite page.

cause of its adaptability to favorable soil and climatic conditions, began soon after its introduction to grow in a semiwild state around the old Jesuit settlements of Guairá, San Ignacio, Jesús y Trinidad, Santa Rosa, etc. and spread over wide areas across the plains and through the jungles. This wide distribution of the bitter orange tree may have been caused by migrating Indians carrying the fruit and throwing away the pits. The opinion has been expressed that the bitter orange tree may be a native of Paraguay because of its wide distribution and also because of the purely Indian names by which the Guaranís designate this fruit, while they use Spanish names for every product introduced by Spanish conquerors. However, botanists today take it for granted that the citrus fruit was introduced into the Western Hemisphere, even though there exist no definite data. It would be interesting to study the early reports of the Spanish missionaries compiled in the Indian Archives of Seville.

At the left is a view of a Petitgrain plantation in Paraguay. Below is shown transportation of the cut leaf material.

Botany of the Paraguayan Bitter Orange Tree

It is rather doubtful that the variety of bitter orange exploited in Paraguay is identical with that of *Citrus bigaradia* Risso, grown in Southern France, Spain, Algeria and Italy. The whole question is confusing because of the many varieties and subvarieties.

As far as the *Paraguay* bitter orange tree is concerned, there exist two subvarieties, viz., the sour-bitter and the semisweet orange. The morphological difference is only very slight; their leaves are quite similar but their fruits vary in regard to appearance and flavor. The semisweet fruit-bearing tree is more numerous and, therefore, the most important one of the group. This fruit, though quite different from that of the regular sweet orange, is still edible; it is consumed mostly by the Indians. The Guaraní Indians, being keen observers of nature, call it "Apepú jheé," "Apepú" originating from "ape" (exterior, surface) plus "pú" or "vú" (soft, agreeable, fleshy, thick) and "jheé" meaning sweet. The fruit of this "Apepú jheé" is somewhat smaller, its color is reddish, its peel firmer and coarser and its flavor somewhat sweetish or, better expressed, not as bitter as that of the "Apepú jhai," meaning bitter orange. The latter variety is distinguished by larger fruit, a more yellow color, a smoother, thicker and softer peel and a distinctly sour-bitter flavor. The resistance of both varieties to "gemesis" and scale disease is extraordinary. Both have the typical and characteristic leaves of the citrus genus, i. e., primitive leaves with winged stalks.

The bitter orange tree is found semiwild in the vast forests throughout certain sections of Paraguay's interior. In certain districts the trees are planted for the purpose of producing bitter orange oil, as we shall see below.

History and Development

For many years, the so-called oil of petitgrain has been distilled in Southern France from the leaves and twiglets of *Citrus bigaradia* Risso, the bitter orange tree. The tree is planted in Southern France, also in Algeria, Spain and Sicily, mainly for its flowers which serve as distillation material for the so-called neroli bigarde oil, one of the most valuable adjuncts in the art of perfumery. The leaves and small twigs, resulting from the trimming of these trees, are used for the distillation of petitgrain oil. Because of the higher cost of labor prevailing in Europe and the greater care employed in selecting and harvesting the raw material and distilling the oil, the French or other European petitgrain oil is far superior in quality and, therefore, much higher priced than the corresponding oil produced in Paraguay.

The Paraguayan petitgrain oil industry owes its existence to the French botanist, Balanza, who visited Paraguay in 1873 and started to produce petitgrain oil near Villa Rica in 1880. Even today, the Balanza family owns extensive petitgrain plantations around Villa Rica. The industry developed and the Paraguay petitgrain oil became a very important raw material for perfumery, especially in soap work. Its clean, pronounced odor is agreeable and refreshing. More than 220,000 pounds of petitgrain oil were exported from Paraguay in 1938. Production of this oil could still be increased if the distillers, instead of working up only the plant material from their own plantations, set up

At the left is arrival of the cut leaf material in front of a small distillery. Below is shown a still for distillation of Petitgrain oil. At the bottom of the page is shown the firing of the still which are heated with direct fire.

migratory stills in the jungles, penetrating thereby more remote regions where the wild-growing plants have thus far remained untouched. Evidently, attractive prices alone would induce producers to undertake the trouble, hardships and cost of organizing distillation posts in the more remote interior.

Export Figures for Petitgrain Paraguay Oil in 1939

United States	63,600	kilos
France	14,040	"
England	11,400	"
Germany	7,600	"
Holland	4,480	"
Japan	920	"
Other countries	2,520	"
Destination unknown	2,160	"
Total	106,720	kilos

Producing Regions

As pointed out, there exist in Paraguay two subvarieties of the bitter orange tree, the leaves and twigs of which are distilled for their essential oil:

1. The so-called "Apepú jhai," the bitter-sour variety, which is not edible. Its leaves have a normal content of essential oil and the oil has a normal ester content.

At the left is shown a typical Petitgrain oil distillery heated with direct fire. To the left of the picture is the steam generator, to the right the condensor, and in the center the still which is being charged with leaf material. Below is shown another Paraguay Petitgrain oil distillery, steam being generated in the boiler at the left which is heated with direct fire, and distillation of the leaf material taking place in the still at the right.

2. The so-called "Apepú" jheé," the semisweet variety, the juice of which is consumed by the Indians. The peel oil, when squeezed by hand from the rind, very slightly resembles mandarin oil. Its leaves contain much less essential oil than those of the bitter-sour subvariety; the ester content of the oil is subnormal. The leaves of the "Apepú jheé should, therefore, not be used for distillation, although this is occasionally done in certain districts.

The producing regions of petitgrain oil are northeast and south of Asuncion, between the rivers Paraná and Paraguay. The main centers are Caballero, Itacurubi, San José, Coronel Oviedo, Villa Rica, Caazapa and Yegros. Orange trees also grow in the state of Matto Grosso in Brazil, but it is said that their yield of oil is inferior and that the oil is not exported. The producing centers of Paraguay are located mainly in the Cordilleras, in the hilly sections between the above mentioned rivers. The trees growing in the plains and in the lower altitudes give an inferior yield of oil which is also subnormal in regard to the ester content. Because of the absence of ample sunshine, the same is true of the trees growing wild in the dense jungles.

Economic Set-Up

Years ago, the bulk of Paraguay petitgrain oil was distilled in numerous migratory stills erected in the vast jungles, the leaves of wild-growing trees serving as distillation material. The relatively high prices of oil prevailing at that time permitted distillers to move their stills and equipment into the forests, carry along supplies for several months, and finally to transport the oil back to the trading centers. The lower prices of the last few years eliminated this form of migratory distillation. The producers could no longer make a living exclusively from distilling this oil and certainly not by distilling in the inaccessible interior where transportation doubles and triples the cost of food, general supplies, etc. Consequently, the bulk of oil was produced by a great many small settlers, white and half-breed. Cutting and clearing the jungle, they spared the wild growing orange trees and between them planted their other crops, such as corn, tobacco, cotton and manioc. Whenever these settlers were in need of cash and time permitted, they distilled the leaves of their bitter orange trees. This condition prevailed generally until about a year ago when the oil prices started to rise and it again became feasible for producers to set up migratory stills in the forests, should the demand for oil warrant it.

Planting

In order to start a plantation, the seed is first planted in a nursery. After one year, the young plants are transplanted into rows three meters apart, with a distance of two meters between each plant, so that one hectare contains about fifteen hundred trees. The root system develops after the second year. After three more years, the tree bears fruit and sufficient leaves to be harvested. If the young plants are not transplanted,

At the left is a scene during lunch hour at a Paraguayan Petitgrain oil distillery. Directly below is shown the filling of a Petitgrain oil still with leaf material. At the bottom of the page Petitgrain oil and water are separating in a Florentine flask.

the time until the first harvest can be shortened to three years but the trees will be rather weak. The planting should be weeded out three or four times a year, which procedure assures a much higher yield of leaves. A normal tree yields about ten to fifteen kilos of leaves per year. Without hoeing and weeding out, the leaves have a tendency to turn yellow.

It is interesting to note that the planted bitter orange trees of Paraguay are not permitted to grow to full development, with trunk and round crown like those (neroli bigarade) of Southern France, Spain, Italy and Algeria. The Paraguayan bitter orange tree is kept in bush form, from which the outer branches and leaves are hacked off with machetes so that only the skeleton the bush remains. From the side branches, the leaves of and green branchlets are cut off for distillation while the wooden parts are thrown away or used as fuel. The distillation material should consist only of leaves and should not contain any small fruit which lowers the solubility of the oil and influences its optical rotation. Oil distilled exclusively from leaf material is laevorotatory, while dextrorotation indicates the presence of distilled peel oil.

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COSMETIC MANUAL

25 BATH SALTS

By JOSEPH KALISH

Two general groups may be listed under the heading of bath salts, these being bath salts and effervescent bath salts. These may also be prepared as tablets, but this form will not be considered at any great length, since there are no special problems in formulation. The addition of starch, talc, etc. is generally required to make possible the pressing of tablets, but beyond this the problems are mechanical, and often quite difficult to solve.

Bath salts are colored and perfumed crystals which dissolve readily in the warm bath water and provide perfume and color. Appearance is an important factor in their sales appeal, and since it is available in fine crystalline form at a low price, sodium chloride was once a favorite. Since it is altogether devoid of water-softening power, and may even reduce the lathering power of soap, its exclusive use is now restricted to the cheapest products.

It is important to add water-softeners to bath waters even where water is relatively soft, in order to prevent the deposition of sticky lime soaps which form an unpleasant film on skin and hair. Not all products are of equal efficiency in this respect, with the carbonates and phosphates of sodium being among the most useful. Industrially, sodium silicate compounds are extensively used, but are generally unsuitable for incorporation in bath preparations.

Sodium thiosulfate, often recommended because of its fine crystalline structure, is cheap but useless because it has no power to soften water.

Sodium carbonate is available in three forms, as the anhydrous soda ash, crystalline monohydrate, and the decahydrate or washing soda. Soda ash is obtainable only as a powder or very fine crystals and is not utilized to any appreciable extent. Washing soda, on the other hand, is available in many crystal sizes, is cheap, and popular. It dissolves rapidly and completely in water. It is not completely stable, however, losing moisture in dry atmospheres, the surface of the crystals being transformed into white, powdered monohydrate. An air-tight container and a coating of glycerin or some other hygroscopic substance prevent this trouble. More important is the fact that washing soda crystals melt and dissolve in their own water of crystallization at summer temperatures, making an unsightly caked mass in the bottle.

The monohydrate is free from the disadvantages of the decahydrate. It is available in a range of sizes of rounded, stable crystals and dissolves quite as well as washing soda.

Trisodium phosphate is an effective water softener but has the same disadvantages as washing soda. Both this compound and the various types of sodium carbonate are much too alkaline to be considered the best compounds for bath use. They may not be actually harmful to the skin, but this excess alkalinity is quite likely to contribute to excessive skin dryness.

The relatively new tetrasodium pyrophosphate is not highly alkaline, is available in good crystals, is a good water softener, and should find increasing use in bath salts. Sodium hexametaphosphate is a very good softening compound and is substantially neutral in reaction. It does not, however, seem to be available in crystals.

Sodium sesquicarbonate is one of the best materials for use in bath preparations. It is a combination of sodium carbonate and bicarbonate in needle-like crystals and is a good water-softener. The crystals are quickly and completely soluble in water and the presence of bicarbonate substantially reduces alkalinity.

Borax, often recommended, has low efficiency in softening water, is a very mild alkali, seems to have some detergent action, and crystals are completely stable. Good crystals are not easily obtained.

Perfume in bath preparations is, of course, extremely important. Pine types are first in popularity, but many floral odors have been successfully introduced. In bath salts, choice must be limited to soap perfumes and others compounded to be especially resistant to alkali;

(*Continued on page 648*)

HAIR

By M. A. LESSER

WHATEVER purpose it may have served in the past history of man, there is little doubt that the main function of the hair on the head is now largely ornamental. Despite this, or more probably because of it, the scalp hair has received much attention, which some consider to be far out of proportion to its importance. However that may be, there still remains much to be learned concerning the physiology of hair.

However, the anatomy of the hair is quite well known. Actually each hair is a long filament of epidermis, which lies in a dermal depression called the hair-follicle. The hair grows from a special dermic papilla, a separate organ. Viewed in cross-section, a hair will show an outer cuticle consisting of overlapping scales, next the cortex and in the middle, the medulla. Each hair is generally considered as having two parts, a shaft, the visible portion above the skin, and a root, which lies within the skin.

The root lies in the hair follicle, which is a narrow pit of the dermis that projects down into the subcutaneous tissue and is lined by an involution of the epidermis. Associated with and opening into each hair follicle is one or more sebaceous or oil glands. An erector muscle, a slim bundle of smooth muscles, runs from the dermis to the side of the follicle. It is this muscle that makes the hair "bristle" during moments of terror.[1] The papilla, which lies in an indented portion of the hair root at the base of the hair follicle, contains a small mass of connective tissue and a tuft of blood capillaries. Hair growth occurs only from this papilla. It is the general view that a fallen hair or torn-out hair can be regenerated as long as the papilla remains intact. Goodman,[2] however, believes that the importance of the papilla for hair regeneration has been overemphasized.

Hair, like the nails and the epidermal layers of the skin, consists mainly of the albuminoid, keratin. Frequent chemical analyses of the hair have shown that, within certain small variations, the proportions of the different elements present are quite constant. The variations that do occur are attributed to such factors as color, race, sex and age. One series of determinations show that the hair of Caucasian adults contains: sulfur 5.22, nitrogen 15.79, carbon 44.49, hydrogen 6.44 and oxygen 28.66 per cent.[3] Small quantities of lead, antimony and arsenic are sometimes found in hair. Lead, at least, has been proven to be due to contamination with lead dust, and it is very possible that the other metals may be due to similar factors.[4] Wuhrer,[5] however, has found that minute quantities of arsenic are normally present in the hair.

More indicative than a mere listing of the constituent elements, are the amino acid components of the hair. Cystine, representing about 16.5 per cent. of all the amino acid present, is perhaps the most important. Not only is sulfur-containing cystine essential for the synthesis of hair keratin, but it also affects the texture, type and amount of hair produced.[6] Experimental studies have shown, that since the body also requires cystine, diets low in this amino acid will supply the body growth needs to the detriment of the hair growth.[7] However, it has also been found that the addition of cystine to diets already containing adequate quantities of this substance had no effect on the amount or composition of the hair.[8]

The assertion that cholesterol is intimately concerned with hair formation is apparently based largely upon theoretical considerations. Recent Japanese studies[9] may, however, be more illuminating. In these experiments, the hair was removed from rabbits. While the new hair was growing, the blood cholesterol varied widely and an increase of the blood cholesterol occurred. When the hair growth was completed, however, the blood cholesterol levels fell to their normal value. The injection of anterior pituitary hormone caused a more rapid growth of hair on the animals, and was accompanied by a marked increase in the blood cholesterol. Injections of sex hormones had either no effect or were slightly inhibitory; the blood cholesterol of these normal animals remained low.

Aside from the vital factor of adequate nutrition, particularly with respect to sulfur, the appearance, texture and growth of the hair also depends upon other factors, notably the endocrine glands and sympathetic nervous system. There is no doubt that the endocrines play an important role in hair production. It is known, for example, that changes in thyroid function cause modification of the growth and pigmentation of the hair.[10] In recent years, the importance of the pituitary in relation to hair growth has received much attention.[11] The place of the sexual glands and the adrenals are also generally recognized. Nevertheless, the extensive data available requires more correlation before a really true hormonal picture can be obtained.

Danforth,[4] in his discussion of the physiology of human hair, says that in the production and replacement of hair, each follicle passes through a cycle of active and quiescent periods. The hair shaft itself furnishes an index of this cycle. Although accurate and detailed data on the characteristics of the cycle is not extensive, determinations on scalp hair have yielded some interesting information. Such hairs grow at the rate of about 0.4 mm. per day and normally reach a length of some 65 cm. From this, it has been inferred that the period of continuous growth or follicular activity lasts about 1600 days, and is probably seldom longer. The duration of the resting phase of the cycle for scalp follicles is believed to be short. In general it appears that follicles that produce the larger and longer hairs show a greater output per unit time and are more continuously active than the follicles which produce shorter hairs.

The question of whether or not there is a variation in the rate of hair growth during the various periods of the day has not been satisfactorily answered. However, from the studies of Voit[12] it does appear that there is a seasonal fluctuation of head hair growth. Measuring the output by weighing, he found the growth to be greater from March to July than from August to February.

A point of major importance and interest to the dermatologist and cosmetologist alike is concerned with whether or not external treatment can influence hair growth. One medical journal[13] states bluntly that, "No application to the skin that is known has the capacity either to increase or to retard the growth of hair." Danforth, however, believes that "despite the highly refractory character of the hair follicle, it is obviously not entirely immune to either internal or external influences."

Several years ago, Forster[14] undertook a thoroughgoing, systematic investigation of the influence of externally applied preparations to promote hair growth. Cats were treated with six classes of medicaments of different chemical and pharmacologic character, but all designed to stimulate hair growth. Among these were such varied materials as cholesterol, chemical degradation products of hair, skin irritants, alcohol, petrolatum, and others—nineteen in all. Wherever any of these preparations, regardless of class, was rubbed into the hairless skin, there was an increased hair growth. Since the hair growth increase was so obviously not due to the type of preparation used, the self-evident conclusion was that the massaging required to rub in the medicaments was the principal factor. The increase in the growth of hair must, therefore, be ascribed to the effect of mechanical stimulation, an increased blood circulation, and perhaps also a cleansing of the skin. However, Forster also reported that the mechanical effect may be increased or enhanced by the use of locally acting chemical stimulants.

More recently, certain members of another class of compounds, the hormones, were tested for their external effects on hair growth. Danforth, who performed these experiments on himself, failed to find any effect on hair follicles following the application of sex hormones or cortical hormone two or three times daily for a week.

In passing, it should also be mentioned that cutting the hair at any point has no effect, good or bad, on its growth, despite popular superstitions regarding the benefits of such treatments. Indeed, brushing is considered the best method of stimulating the circulation of the scalp and therefore the growth of the hair.[15]

The color of the hair is due to the diffuse or granular pigments or to a combination of these and to the refraction of light. Not much is known about the chemistry of these human hair coloring substances. However, it is generally accepted that granular pigments are responsible for the various shades of brown, which at their greatest intensity are usually called black. The diffuse pigments apparently account for all shades of red hair. Arnow[16] suggests that the color of red hair is due to the presence of an oxidative product of melanin. There is evidence that glossy black hair contains both diffuse and granular pigments. Albinism appears to affect the granular more than the diffuse pigments.[4]

Light, as is well known, has a bleaching effect, and for this and other reasons, the hairs on the head often show gradations of color between the base and the tip. Goodman disputes the old view that air in the medulla is responsible for white hairs. He asserts that the old hairs do not lose their pigment, but that the pigment producing stimulant is lost. "The cause of the absence of the pigment producers," he writes, " is obscure."

Experimental studies now going on with certain constituents of the vitamin B complex may soon clear up this obscurity. The so-called anti-gray hair factor, which has been known for the last two years, is apparently one such substance.[17] Very recently synthetic pantothenic acid was demonstrated to have similar anti-gray hair properties. The administration of this acid restored the fur color of rats suffering from a deficiency of this vitamin.[18] Other investigators[19] had earlier reported the isolation of a crystalline substance which also demonstrated such color-controlling properties. This material, however, it was stated "should be clearly differentiated from pantothenic acid."

As is the case with several other components of the vitamin B complex, there is no proof that these sub-

stances are of any value to the human and, as yet, they have had no clinical application. They are necessary, however, to maintain the normal color and growth of hair in black and piebald rats and in silver foxes. It is quite possible that future research will show a closer relationship between these several vitamins and it is very much within the realm of probability that these factors will prove of clinical importance.

Hair pigmentation naturally brings up the question of hair dyes. It is not the purpose of this discussion to go into a consideration of hair dyeing technic. However, mention of certain variable characteristics of the hair may be of interest in this connection. Not only may one individual's hair take dye much more readily than another's, even though both may appear to have the same texture, but acceptance of the type of dye, vegetable or metallic, may also vary. Hair on different parts of the same scalp may even show a difference with respect to dyeing. Later growing hairs, which contain more fatty and less keratin materials, often give a different color. The same is true of the parts of hair next to the scalp where the hair grows in.

Color penetration and duration will depend largely upon the hardness of the hair cuticle. Gray hair, for example, is particularly difficult to dye and fine soft hair is harder to tint than coarse, stiff hair. Washing with soap and water is considered a good preparation for dyeing, but on occasion the use of a weak alkali or of hydrogen peroxide may be a necessary preliminary to coloring. Strong defatting solvents dry the hair excessively and retard dyeing. A good rule to follow is the suggestion that anyone who wishes to have the hair dyed should first have the dye tried out on a small, inconspicuous spot to determine how well the dye takes and whether the individual is sensitive to it.[20]

Hair is frequently classified according to whether it is straight, wavy or kinky, or, to put it another way, lank, curly or wooly. Perhaps a certain degree of structural difference does exist between these various types of hair. It is often stated that hair with a circular cross-section is straight, while hair with an oval outline is curly. However, the work of Kneberg[21] shows that hairs with very different cross-section shape may or may not curl. However, it is quite well established that a natural wave or curl is an hereditary characteristic. Nevertheless, this fact does not deter those who wish to acquire a wavy head of hair—hence the popularity of "permanent" waves.

By compressing one side more than the other, straight hair can be made to curl. With the proper application of heat and moisture, this curled or waved condition can be more or less fixed. Back in 1906, Nessler introduced the principles of permanent waving which are based on this knowledge. Nessler's major contribution was methods of freeing the hair of its oil film so as to permit the absorption of moisture. He employed aqueous solutions containing about 5 per cent. of an alkaline salt to impregnate the hair prior to winding on rods and heating. Modern solutions for this purpose consist mainly of ammonia salts and salts of sulfurous acid, particularly ammonium sulfite. It is said that the presence of sulfurous acid prevents yellowing effects on the hair. With dyed hair, however, these solutions must be used cautiously and it is advised that sulfite-free solutions be used.[22]

The tensile strength of the individual hair is of a rather high order and can stand a good deal of strain without breaking. Persons who treat or condition hair should be warned, however, that the effort required to pull a hair from its follicle is almost always considerably less than that required to break it. Of course, individual hairs differ considerably in their resistance to pull.[4] If when the hair is pulled out, the papilla is also removed or destroyed, no regneration can occur.

Various estimates have been made of the number of hairs on the human head, not all in close agreement. The figure of Thieme,[23] 80,000 to 100,000, is perhaps as accurate as any, with a calculated loss of between 40 and 50 hairs daily. In the normal course of events, these hairs are replaced as fast as they are lost. As long as regrowth keeps pace with hair losses, everything is satisfactory and the head hair remains full. If, however, regeneration or growth of new hairs does not keep pace, the obvious result is thinning of the hair, and unless checked, eventual baldness.

Baldness of alopecia may be total or partial, with the latter by far the more frequent. The causes of alopecia are quite varied and in many instances the etiology is obscure. Without going into a detailed discussion, the chief causes of baldness may be listed as follows: 1. Hereditary, 2. Neuropathic, such as nervous shock, long continued mental strain, worry and anxiety, 3. Symptomatic or Toxic, including such factors as disease, subnormal nutrition, vitamin and hormone deficiencies, poisoning by arsenic, tin or thallium, 4. Parasitic, e.g. ringworm and 5. Neglect, e.g. lack of cleanliness, insufficient scalp stimulation, excessive dryness, and dandruff formation and accumulation.

The treatment of alopecia is in itself a vast subject. Where systematic conditions are the responsible factors, they must be sought out and remedied where possible. External causes likewise warrant specific remedial treatment. However, recent studies on the treatment of baldness should be mentioned. Kylin,[11] for example, treated many cases of total alopecia with pituitary, and in a recent report, states that in 80 per cent. of these, very excellent results were achieved. The failure of the remaining 20 per cent. to respond to this treatment emphasizes that other hormones besides the hypophyseal are concerned with the regulation of the growth of hair. Schwemmler[24] found that the administration of vitamin A stopped loss of hair in patients suffering from hyperthyroidism after eight to ten days, and such treatment also increased the hair growth. Vitamin A, he observed, inhibits loss of hair in such cases of overactive thyroid glands by fixing the hair to the follicle and favorably affecting cornification in the hair follicle.

With the hair, as with everything else, prevention is always preferable to cure. This is particularly true for

those with a familiar tendency to hair losses or baldness. Nutritional adequacy is, of course, a prime requisite, plus sufficient physical and mental rest. To provide an abundance of fresh air and sunshine to the scalp, only a light, well-ventilated hat that is not too tight should be worn—or no hat at all, conditions permitting. Daily brushing with a stiff brush is beneficial to restore and maintain the scalp circulation. Finger-massaging is similarly beneficial. The scalp must be kept clean; shampooing once every two or three weeks is generally considered sufficient. The shampooing ought to be followed by the use of a good brilliantine. When the hair is excessively oily, a "dry shampoo" is considered more hygienic than too frequent hair washing. For this purpose an absorbent powder is rubbed into and then thoroughly brushed out of the hair, the process repeated as often as necessary.[25]

Persons with thinning or brittle hair must especially avoid the use of excessive heat or undue pressure or tension such as results from the use of curling irons, curl papers and the like. Strongly alkaline hair preparations are also contraindicated. These all lead to undue fragility of the hair. Dandruff, undoubtedly one of the major causes of premature baldness, requires cleansing and scalp stimulation. For the latter a wide variety of physical and medicinal agents are available. Lotions and similar preparations are especially useful.

All-in-all, while there is a great deal of valuable information available on the subject, the knowledge of the hair, particularly with regard to its physiology, is not quite as extensive as its importance warrants.

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Bath Salts

(*Continued from page 644*)

the perfume should be carefully tested for discoloration in the actual salt mixture to be used.

Added color must be stable to light as well as to alkalies and the decision must be made as to whether the bath salt is to color the water or merely be itself tinted. Water soluble colors are pretty well limited to the group of basic colors which are compatible with the alkaline salt mixture and some of the dye powder is often mixed with the salt mixture in order to color the water without making the crystals too dark. Basic dyes are brilliant, but not especially fast to light and are often supplemented by the addition of light-fast, brilliant, and insoluble lake colors.

Perfume and the insoluble colors are ground with the ethyl ether of diethylene glycol and sprayed onto the crystals, which are then thoroughly mixed until color and perfume are homogeneously distributed. Tests must usually be made with the insoluble color selected so that it will not be one of those that leaves a colored ring in the tub.

Before examining the formulas listed below, we must understand that suitable crystalline material alone, such as sodium sesquicarbonate, after perfuming and coloring, is often used as the bath salt.

Sodium bicarbonate	50.0
Borax	50.0
Sodium sesquicarbonate	50.0
Sodium chloride	26.0
Sodium carbonate	24.0
Sodium sesquicarbonate	80.0
Borax	20.0
Sodium sesquicarbonate	91.0
Magnesium sulfate	7.0
Sodium sulfate	2.0
Sodium pyrophosphate	25.0
Sodium sesquicarbonate	50.0
Borax	25.0
Sodium carbonate	94.1
Sodium perborate	5.9
Sodium carbonate	20.0
Sodium bicarbonate	70.0
Casein	10.0
Sodium carbonate	56.0
Sodium bicarbonate	33.0
Borax	11.0

Effervescent bath salts consist of mixtures of carbonates and bicarbonates with solid acids, which when mixed with water liberate carbon dioxide. Since weight for weight, more carbon dioxide is given off by the bicarbonate than by carbonate, and the former is noncrystalline, it is almost essential to use the finely crystallized sodium sesquicarbonate (a chemical compound of sodium carbonate and bicarbonate) as the alkaline component. Although the solid acid specified in most of the older formulas is tartaric acid, this may profitably be replaced by citric acid which is now sold at almost half the price of tartaric. The gas-liberating component should usually be present in sufficient excess over the amount required for combination with the acid to soften the water and to prevent an acid reaction which would reduce the lathering power of the soap. In terms of equivalents, 75 parts of tartaric acid may be replaced by 64 parts of citric acid; either of these equivalent weights will exactly react with 84

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BRITTLENESS OF NAILS*

By HENRY SILVER, M.D.
and BERNARD CHIEGO, Ph.G.

THE meager references to brittleness in the literature, usually hidden in the discussion of severe nail changes, indicated the need for a study on the occurrence of brittleness. It was deemed advisable to determine the frequency of occurrence in various diseased states and the occurrence of brittleness induced by occupation and contactants.

Accordingly two surveys were undertaken. The first was conducted among hospitalized or clinic patients and the results are summarized in Table I. The second is a study of over 1000 women including typists, housewives, factory workers, etc. The contradictory reports on the effect of lacquers on the nails are taken into consideration in this second survey and the findings reported in Table II.

Several attempts were made to develop an apparatus for accurately measuring brittleness but it was found impossible to get consistent results with either a pressure cutting or puncture method.

The incidence of brittleness was calculated as the per cent. expression of the total number of nails examined.

Brittleness is frequently encountered in disease. It is evident that in acute infections as in pneumonia, acute tuberculosis and early syphilis the occurrence of brittleness is negligible. In chronic diseases of the ear, nose and throat, gastro-intestinal tract, lungs, cardiovascular and nervous systems and diabetes the incidence of brittleness is considerable. In diseases of the endocrine system brittleness occurs in 29.2 per cent. In anemias brittleness is frequently observed. This directed attention to the rôle of iron metabolism in this condition which is discussed later.

It should be pointed out that no conclusions should be drawn from the high incidence of brittleness in a disease with regard to etiologic relationship. However, certain interesting facts are brought out in the study of brittleness in connection with disease. Opinions already expressed in the literature cannot be overlooked.

The occurrence of brittleness in the later stages of syphilis is frequent. Fournier considers fragility of the nail plate, onychia craquele, the most frequent nail change. It is more often seen in women. The highest degree of brittleness consisting of complete crumbling of the nail has been observed in syphilis and described as scabrities unguium syphilitica.

TABLE I
Incidence of Brittleness in Disease

Disease	*Number of Patients*	*Group Age Averages*	*Incidence of Brittleness*
		Years	*Per Cent.*
Allergies	71	34	34.2
Cardiovascular diseases	195	64	14.5
Chronic arthritis	16	44	24.3
Diabetes	127	52	22.1
Endocrine disorders	14	48	29.2
Gastro-intestinal diseases	20	48	36.0
Miscellaneous	6	36	6.6
Nervous diseases	25	47	21.6
Nose, throat and ear diseases	7	27	42.8
Pneumonia	18	40	5.5
Senility and senile dementia	27	81	11.8
Skin diseases	35	40	23.7
Syphilis (1. Early, 2. Latent, 3. Cardiovascular and C.N.S.)	187	38	11.0
Tuberculosis (acute)	154	37	7.8
Tuberculosis (amyloid and diabetic)	98	40	31.3

TABLE II
Incidence of Brittleness in Occupation

Occupation	*Number Examined*	*Women Between 20-30 Years*	*Group Incidence of Brittleness*	*Users of Lacquers*		*Non-Users of Lacquers*	
				Per cent of users	*Incidence of Brittleness*	*Per cent of non-users*	*Incidence of Brittleness*
		per cent	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*
Typists	208	87.5	26.4	95.7	25.9	4.3	38.8
Housewives	108	47.2	45.2	74.1	34.5	25.9	75.9
Clerks	168	85.7	24.7	91.1	23.1	8.9	29.0
Factory workers	262	82.0	29.6	90.6	29.8	9.4	29.0
Secretaries	164	83.5	24.2	90.7	26.0	9.3	7.3
Operators	27	85.1	47.0	96.3	46.1	3.7	50.0
Miscellaneous	72	63.8	31.5	97.2	31.5	2.8	25.0

Most nail changes occurring in cardiovascular disease are due to venous stasis. Blue discoloration is frequently dependent upon the degree of cyanosis. Clubbing of nails, hippocratic nails, etc., are also seen. The occlusion of large vessels should theoretically cause "typical trophic" disturbances but nail changes occur infrequently. The collateral blood supply is apparently adequate.

The occasional periungueal infections in diabetes are not associated with hormonal disturbance but are due to the same general relationship of infection and disease as, f.i., furunculosis and diabetes. Brittleness is found

*Abstracted from *The Journal of Investigative Dermatology*, vol. 3, p. 357 (1940).

in 22.1 per cent. of the cases examined. Occasionally Beau's lines, longitudinal ridges, depressions of the koilonychia type are seen.

According to the survey disturbances of endocrine glands cannot be made directly responsible for the occurrence of brittleness and other nail changes. However, Jamesy and Henderson, Eppinger and Falta are of the opinion that in hyperthyroidism and pluriglandular insufficiency, brittleness is actually characteristic for the disease.

Nail changes attributable to disease of the central and peripheral nervous system are usually severe. The direct influence can be established in many instances. Secondary nail involvement takes place due to impairment of an organ following the loss of nerve function. In diseases of peripheral nerves with resulting paralysis changes occur which can be regarded as trophic. Experimental proof for nail affections resulting from diseases of the nerves is not convincing. Gumpertz and Heller cut the sciatic nerve in a rabbit without resulting damage to the nails. F. Salvat exposed the sciatic nerve in a guinea pig to ice. This resulted in paralysis of the extremity with loss of nails.

Nail changes due to old age are not seen as regularly as changes of the hair. Brittleness occurs in 11.8 per cent. Longitudinal striae, ridges and furrows are common. The frequency of their occurrence is not increased in senile dementia. A number of aged patients complain of brittleness, rhagades and rhexis, others have perfectly normal nails. Generally there is a tendency to hypertropic changes comparable with those seen in the eyebrows, eyelashes, etc. There seem to be no specific changes due to old age.

Brittle nails are frequently seen in psoriasis, dermatophytosis, as a concomitant symptom in association with koilonychia, subungueal hyperkeratosis, etc., and in many other disease entities. Brittleness occurs in 23.7 per cent. It is to be noted that in spite of the frequent involvement of the fingers in various skin diseases the nails remain unchanged.

In pulmonary tuberculosis, especially of the amyloid type or, in association with diabetes, brittleness of the nails is frequently seen. Empyema, emphysema, bronchiectasis frequently show brittle and chipped nails. Among the older statistics of the French authors, the occurrence of nail changes was estimated as high as 50 per cent. of the cases.

In recent years these changes are found only infrequently. The difference lies apparently in the better interpretation of tuberculosis of the lungs. Modern pathology considers hippocratic nails as a disturbance of the circulatory system.

Table II indicates the frequency of occurrence of brittleness in various occupations. It is interesting to note that among the housewives, those not using enamels show a very high incidence of brittleness. In most cases it was found that these women do much of their own housework and the normal contactants of the kitchen and bathroom are suspected. Alkaline detergents, such as soaps, chlorine bleaches, hot water, disinfectants, etc. must be regarded as contributors in this group.

The group incidence of brittleness among operators of heavy office or factory equipment is high and it is assumed that frequent traumatization plays an important rôle.

Among the other groups, the incidence of brittleness is found to be about equal among users and non-users of lacquers.

The incidence of brittleness among those not using lacquers suggests that nail lacquers are not the direct causative agent. This leads us to a consideration of other possible causative factors of brittleness.

Avitaminoses and Nail Brittleness

A series of experimental studies were made in an attempt to ascertain observable structural changes among animals suffering from avitaminoses A, C, D, B_1 and G. The paws of rats on A, D, B_1 and G starvation diets were used and the paws of guinea pigs for vitamin C deficiency. The paws were submitted for histologic examination.

Two control animals, a normal rat and a normal pig were sacrificed. The paws were amputated and prepared for histologic study.

The histologic examination of the paws of the test animals showed no abnormalities of the cells of the matrix.

In spite of these findings the recorded observations on brittleness in avitaminosis should be respected because a prolonged vitamin deficiency, though minor, may bring about changes too small to be noted in a section prepared by this method but sufficient to produce brittleness of the nails.

Among the avitaminoses it is necessary to note that in viatmin A deficiency the skin of secually mature persons becomes dry and rough. Since vitamin A deficiency presents a picture of increased keratinization nail changes such as brittleness might not be apparent.

Little has been reported on the relationship between vitamin B complex and nails. It has been stated, however, that the oxygen uptake of cells is lowered in riboflavin deficiency. In the light of Singer's theory on nail production it is conceivable that avitaminosis B_2 may result in nail changes.

In avitaminosis C, however, nail damage would seem to be expected since the characteristic skin lesion is the perifollicular or petechial hemorrhage. The weakness of the capillaries and fragility of the erythrocytes would expose the blood supply of the matrix to easy and ready injury.

It is interesting to note that brittleness of the nails tends to disappear during the summer months. The question of changed dietary regimen and increased sunlight exposure may contribute to the betterment. This is suggestive of the action of vitamin D.

In a preliminary study of ten patients suffering from various hematologic conditions resulting in secondary anemia various degrees of brittleness were found.

The requirements of iron for adult men are those of maintenance only. In women, in addition to maintenance, the requirements are necessarily increased because of periodic loss of blood, pregnancy and lactation. In view of these facts iron deficiency is more likely to occur in women.

Because the amount of iron in food rarely amounts to more than 15 mgm. per day, it is evident according to Shohl that iron obtained from endogenous sources is quantitatively of prime importance in the economy of the body.

It is conceivable that tissue starvation for iron may exist in spite of a normal or slightly subnormal hemoglobin index or blood count.

Waldenstrom in his interesting observations on iron and epithelium, found that brittleness and koilonychia, as symptoms of essential hypochromic anemia, are cured by appropriate iron medication. Koilonychia found in essential hypochromic anemia without any signs of anemia was treated with iron with complete restoration to normal.

The rôle of iron metabolism becomes one of significance when we consider that many soils, notably through the southern states where anemia is prevalent are so deficient in iron and other trace elements, especially copper, that the foods grown there are lacking in these vital elements.

Thus the utilization and elimination of iron is considered a vital factor in the causation of brittleness.

The Relationship of Unsaturated Fats To Nail Brittleness

The experiments of McAmis, Anderson, Mendel, Burr and Burr showed that animals kept on a fat-free diet grew for a time, but soon developed symptoms indicative of a dietary deficiency disease. The skin was scaly, the tip of the tail appeared inflamed and swollen later becoming heavily scaled, ridged and necrotic.

The disease could be prevented or cured by addition of linoleic or linolenic acid, either in the free form, as esters or as components of fats. Saturated fatty acids were without effect. Oleic acid and a-eleostearic acid, an isomer of linolenic acid, were found ineffective.

Evans and associates have submitted evidence that fat exerts a sparing action on vitamin B, so that under certain experimental conditions, the exclusion of fat from the diet raises the vitamin B requirements. They have also shown that loss of vitamin B from the tissues of rats reared without this factor is more marked when the diet is low in fat than it is when there is an abundance of fat in the rations.

In view of the above it would seem that a direct relationship exists between the supply of unsaturated fats in the diet and normal keratin production. The theoretical concepts of keratinization would incline us to assume that unsaturated fats play an important rôle in the oxidation-reduction processes of the cells. As the cells progress to the stratum corneum the fat content decreases practically to the vanishing point. The rôle of unsaturated fats in the diet is of interest, therefore, in the study of brittleness and should be further investigated.

pH of the Skin and Brittleness

Studies of the pH of the skin have shown that in the apparently unbroken skin of normal individuals the pH of the skin ranges from 4.0 to 7.0 with the great majority lying between a pH of 4.2 to 5.4. Wide variations, however, exist in normal skins from individual to individual and within the same individual from day to day. It is interesting to note that Marchionini and his co-workers have demonstrated that in seborrheic individuals the affected areas are more alkaline than other parts of the skin surfaces. Furthermore, the alkaline areas were shown to be less bactericidal than the rest of the skin, thus predisposing to cutaneous infection or reaction to contactants of all sorts. It has been found, however, that the pH of the skin rises markedly after the use of soap and that several hours are required before the skin again becomes normal (pH below 7.0). In the case of highly alkaline lotions which are forced into the cuticle by non-sterile instruments, highly alkaline reactions may be obtained six to eight hours after manicuring.

This fact, coupled with the increased sensitivity engendered in the skin by high alkalinity would seem to be the cause of irritations obtained in isolated cases. These irritations may lead to brittleness or fungus invasion with similar results.

With regard to the pH of the skin and brittleness it is of interest to note that the lower fatty acids of sweat which are reported by Peck and Rosenfeld to be fungicidal are readily removed from the skin surface by solvents.

Solvents and Nail Brittleness

The effect of solvents on the causation of nail brittleness has been frequently stressed. We have been unable to find direct evidence of this effect among the workers in the lacquer field. A group of workers were exposed to the solvent action of acetone, ethyl acetate, butyl acetate daily over a period of two months without noticeable change. The only exception was found among industrial sprayers of metal coating lacquers who were constantly wiping their hands on clothes soaked in methyl cellosolve. In these cases irritations were due mainly to the constant abrasive action of the cioth as well as the solvent which is a known irritant.

S. Ayres, Jr., suggested that some cases of onycholysis and transverse splitting may be due to nail polish removers. Fox in his reply stated that this should be considered but pointed to the fact that disturbances of the nails from chemical irritants, such as formaldehyde and permanent waving fluids were reported among beauty parlor operators and that his patients had not used nail polishes for several months.

Woolcott found in an investigation of twenty-five business women using the same brand of nail lacquers

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DRUGS IN BRITAIN

Substitution of many drugs is required in Great Britain during war time. The action being taken regarding many products is listed here.

THE substitution of drugs in Great Britain should be of particular interest to manufacturers in this country for many obvious reasons. Therefore, we publish the following results of the examination of the drug resources of Great Britain by the Medical Research Council as reported by the "Pharmaceutical Journal."

"One of the numerous wartime tasks undertaken by the Medical Research Council has been the examination of lists of imported drugs with the object of recommending substitutes which can be obtained at home. A special committee—the Therapeutic Requirements Committee—of the Council has been set up for the purpose and its first report was issued to the Press on October 1.

"The Committee rightly stresses the importance of avoiding the use of shipping to import drugs, and of foreign currency to pay for them, where identical therapeutic results can be obtained by other means. At present there is something like a vicious circle; because there is no shortage, drugs which are not essential continue to be used, and as they are used further supplies are imported. Moreover, important drugs are used for purposes for which they are not essential.

"A provisional list has therefore been prepared with the object of indicating to Government departments, to the various bodies concerned with the compilation of formularies, and to persons and firms responsible for the manufacture and distribution of drugs, both for human and veterinary use:

"A. *Drugs which are readily available at present or which are regarded as essential.*

"B. *Drugs which are essential for certain purposes but the use of which should be restricted.*

"C. *Drugs which are not essential and do not justify importation or manufacture in war-time.*

"A large number of drugs are classified under "A," and out of consideration of space most of these are omitted from the list as reproduced below. Classification "A" includes such substances as:—

"Acacia, aspirin, benzoic acid, mandelic acid, tannic acid, aloes, anise, belladonna, bromides, calcium salts, chloramine, chloroform, cinnemon, cocaine and salts, codeine, colophony, cresol, derris, digitalis, emetine, ephedrine, ergot alkaloids, hexamine, hyoscyamus, hyoscine, kaolin, hydrogen peroxide solution, menthol, methyl salicylate, nux vomica, clove oil, eucalyptus oil, castor oil, oil of theobroma, opium, papain, phenol, physostigmine, quassia, quinine and salts, resorcinol, rhubarb, senna, sodium salicylate, stramonium, strychnine, sulphanilamide, theobromine, thyroid.

"Certain classes of drugs have not been included in the survey, partly because they are the subject of attention by other committees of the Medical Research Council. Thus no detailed survey has been made of the groups of hormones, vitamins, and such biological products as antitoxins, sera and vaccines.

"It will be seen from the following list that where drugs have been marked non-essential or where restriction has been advised, a sufficient range of substitutes procurable in Britain has been indicated."

Drug	Class	Substitute or equivalent and remarks
Acetone	B	Under Government control
Acid Boric	B	Boric acid in boric lint is wasted
Acid Citric	B	Manufacture under Government control
Acid Glycerophosphoric and salts	C	No substitute necessary
Acid Hydrobromic	C	Substitute hydrochloric acid, sodium bromide
Acid Tartaric and salts	C	Unnecessary. Raw material is imported. Substitute citric acid
Aconitum	C	Countries of origin: Germany, Switzerland, France. Importation unnecessary. Substitute benzocaine for local application
Adeps Benzoinatus	B	Under Government control
Adeps Lanae	B	Under Government control
Agar	B	Substitute: Ispaghula. Agar should be reserved for bacteriological media. Production within the Empire should be encouraged
Alcohol	B	Many tinctures can be replaced by concentrated preparations

Drug	Class	Substitute or equivalent and remarks
Amylum	B	Under Government control
Anethum	A	Production in England should be encouraged
Aurantii Cortex	B	Countries of origin: Spain, Sicily, Malta. Production within the Empire should be encouraged. Limited supplies are available from the Empire at present
Avertin	—	Bromethol is identical
Balsam of Tolu	C	Countries of origin: Columbia, S. America. Importation unnecessary. Production within the Empire should be encouraged. No substitute necessary
Benzedrine	A	Amphetamine is identical
Benzoin	A	Production within the Empire should be encouraged
Bismuth salts	B	Substitutes: Aluminum hydroxide, magnesium hydroxide, kaolin and chalk (for gastro-intestinal conditions)
Bismuth Salicylate	—	Substitute: kaolin, activated charcoal
Borax	B	
Buchu	C	Country of origin: S. Africa. Importation unnecessary. Substitutes: Sulphanilamide, hexamine, mandelic acid, sod. benzoate, scoparium
Caffeine	B	Omit from compound tablets such as Tab. Aspirin, Co.
Caffeine & Sod. Benzoate	B	Nikethamide (Coramine), Leptazol (Cardiazol) and Amphetamine (Benzedrine) are partial substitutes
Calumba	C	Country of origin: E. Africa (Mozambique). Produc. within the Empire should be encouraged. Substitute: Quassia
Camphor	A	Production within the Empire should be encouraged
Cannabis Indica	C	Countries of origin: India, S. Africa, Zanzibar
Cantharis & Cantharidin	C	Countries of origin: U.S.S.R., Spain, Hungary, China, Importation unnecessary. Production within the Empire should be encouraged. Substitute: Sinapis
Capsicum	B	Countries of origin: Nigeria, Sierra Leone, E. India. Restrict use of capsicum to manufacture of capsicum wool. Substitute: Sinapis. Colonial varieties of capsicum may be obtainable
Cardamom	A	For tinctures
Cardiazol	C	Leptazol of home manufacture is identical
Carum	C	Countries of origin: Holland, Germany. Some English caraway is available and its production should be encouraged. Substitute: Anethum
Caryophyllum	B	Countries of origin: E. Indies, Zanzibar, Pemba, Madagascar. Reserve for distillation of oil
Cascara Sagrada	B	Countries of origin: Canada, U.S.A., Production within the Empire should be encouraged
Cassia	C	Country of origin: China. Importation unnecessary
Catechu nigrum	C	Country of origin: British North Borneo. Importation unnecessary. Substitute: Catechu
Chondrus	A	Production within the Empire should be encouraged
Chrysarobin	B	Production within the Empire should be encouraged. Substitute: dioxyanthranol
Cinchona	B	Importation should be restricted to the supplies required for the manufacture of quinine. The use of cinchona as a bitter should be discouraged. Production within the Empire should be encouraged
Coca	A	Production within the Empire should be encouraged
Coccus	C	Countries of origin: Canary Islands. Importation unnecessary. Substitute: Liq. Azorubri. Other good colors are available
Colchicum corm & seed	A	Production in England should be encouraged
Copaiba	C	Country of origin: Northern S. America. Importation unnecessary. Substitutes: Sulphanilamide, hexamine, mandelic acid, sod. benzoate, scoparium
Coramine	—	Nikethamide is identical
Coriander	C	Countries of origin: Morocco, U.S.S.R., India, Central Europe. Importation unnecessary. Substitute: Cardamon
Creosote	A	Production within the Empire should be encouraged
Cubeb	C	Country of origin: Malay archipelago. Importation unnecessary. Substitutes: Sulphanilamide, hexamine, mandelic acid, sodium benzoate, scoparium
Cusso	C	Country of origin: N.E. Africa. Importation unnecessary. Substitutes: Filix mas, carbon tetrachloride
Dextrose	B	Under Government control
Dial	—	Allobarbitone is identical
Doryl	—	Carbachol is identical
Emetine & its salts	A	See Ipecacuanha
Ephedra	A	Production within the Empire should be encouraged
Ephedrine & its salts	A	
Ergot	A	Production within the Empire should be encouraged
Evipan & Evipan Sodium	—	Hexobarbitone and soluble Hexobarbitone are identical
Ext. Hepat. Liq.	B	Importation of liver is under Government Control. Injection is more economical and effective
Ext. Malt	B	Under Government control
Ferri Arsenas	C	Substitute Ferri Sulphas, or Ferri et Ammon. Cit. with arsenic
Ferri et Ammon. Cit.	C	This is not the most economical form of iron, ferrous sulphate is cheaper
Ferri et Mang. Cit.	C	Substitutes: Ferri Sulphas, Ferri et Ammon. Cit.
Ferri et Quin. Cit.	C	Substitutes: Ferri Sulphas, or Ferri et Ammon. Cit., with quinine
Ferri et Pot. Tart.	C	Substitutes: Ferri Sulphas, Ferri et Ammon. Cit.
Ferri et Strych. Cit.	C	Substitutes: Ferri Sulphas, or Ferri et Ammon. Cit., with strychnine
Ferri Glycerophos.	C	Substitutes: Ferri Sulphas, Ferri et Ammon. Cit.
Ferri Hypophosph.	C	
Ferri Lactas	C	
Ficus	C	Therapeutic value doubtful
Filix Mas	A	The production in England should be encouraged
Foeniculum	C	Production in England should be encouraged
Gelsemium	C	Country of origin: U.S.A. Importation unnecessary. Substitutes: Synthetic analgesics
Gentian	C	Countries of origin: France, Germany Spain. Almost unobtainable. Substitute: Quassia. Production within the Empire should be encouraged
Glycerin	B	Substitutes are under investigation
Glycyrrhiza	B	Countries of origin: Spain, Sicily, Italy, Irak, U.S.S.R. Production within the Empire should be encouraged
Hamamelis	C	Country of origin: U.S.A. Production within the Empire should be encouraged. Substitute: Tannic acid
Hydrarg. Subchlor.	B	
Hydrarg. Oxycyanid	B	
Hydrarg. Perchlor.	B	Substitute: a phenolic antiseptic of the chlorinated phenol type
Hydrarg.Oxid.Flav.	B	

(*Continued on page 671*)

PULLING TOGETHER

110 lb. Groper speared by natives at Darwin, N. T. Photo courtesy Australian Nat'l Travel Ass'n.

GET THE BENEFIT OF NEW ENGLAND TEAMWORK ON YOUR COLLAPSIBLE TUBE PROBLEMS!

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MERCHANDISING NEWS and PACKAGING NOTES

THE COSMETIC TREND: Current income statistics continue to run ahead of last years' figures with the prospect that this improvement will be maintained well into the early part of the next year. The income group, showing the largest advance, are the higher paid wage earners and low to medium salaried white collar workers. This seems to indicate that the demand for higher priced toilet goods may be approximately the same during the present as during last winter, but that substantial increases may be expected in lower and medium priced items, with a good sales prospect for the smaller units of the higher priced gift perfumes during the Christmas sales season.

While distributors still concentrate heavily upon the department store market, at least in the larger cities, there are indications of a strong revival of drug store sales of toilet goods, especially in the medium sized cities. Competition between the two certainly is fairly active; the drug stores making up by their larger number of outlets what they lose in individual volume. Much interest also is shown in manufacturing circles in the efforts of the better low-unit-price variety stores to introduce higher priced toilet goods upon their counters. Results during the current Christmas season may be a valuable indicator for future developments in this direction.

Toilet goods counters generally appear to be doing better this late fall than during the corresponding period of last year. More better grade merchandise is in demand. Part of this increased activity is doubtless due to better planned merchandising and a more logical spacing of novelty releases. Stocks show greater variety. Buyers seem to believe that the usual post-Christmas let-down will be compensated for this year by a good demand in utility cosmetics.

Fashion experts now have turned to the extensive use of color following the somewhat drab beginning of the season. Bright shades for make-up and nail polishes will be required to keep step with the brilliant hues of afternoon and evening dresses. This should bring the light reds in the foreground of the demand, tempered possibly somewhat later in the spring season with henna tints in the southern resort markets. These may carry over into the late Spring and early summer in the northern section of the nation.

Whether the present vogue of henna and warm tints for the hair among members of the younger set will spread is somewhat problematical. Hairdressers seem to feel that it will decline with the coming of the permanent waving season. It may herald, however, a drift to extreme make-up effects at the beginning of the summer which manufacturers may want to give a test during the Florida season. Hat fashion still show plenty of hair promising another good season for shampoos, rinses, brilliantines and hair conditioners.

In the absence of a decisive fashionable trend perfumes must rely for increased sales practically entirely upon the growing purchasing strength of the consumer. Sales successes of individual counters depend largely upon the manner in which the assortment meets the size and quality requirements of the store clientele. Customers prefer bouquets and known brands but appear to be more susceptible to sales suggestions than usual.

The best prospects for successful quick turn over sales promotions most likely will offer themselves in seasonal outdoor and sport cosmetics. Counter displays will draw for these upon a larger variety of cosmetics with a strong underlining of the protective sales argument for "winter proofing" the skin and hair. This will give protective creams and lotions, cream rouges, lip pomades, etc. a chance. It should be remembered, however, that the build-up of cosmetics as winter items is largely a matter for the manufacturer. The sales attendant hardly can be expected to create sales arguments for a product for which its manufacturer has failed to provide a "lead."

This particular phase of the business has great possibilities for that let-down period after the holiday buying and should be built up considerably. This need not be done by special packaging or special products. There are plenty of products in every line for every "winter proofing" need of skin, hair and hands. Concentration on this sort of thing will result in increased sales of staple merchandise. A woman may not bother ever to

use a foundation under her powder, but if she is sold on the idea that it will help protect her skin whether it be in sunny climes or wintry winds, besides enhancing her complexion, she will be much more likely to buy it. Of course, products aimed especially at this market are always good and are coming more into their own each year. Special foundations, protective lotions, emollient creams, hair preparations, hand lotions and creams plus gloves, soothing body lotions, all have possibilities in this direction.

FLUORESCENT TREE: Parfumerie de Raymond has used fluorescent cellulose acetate plastic in a Christmas tree outline to create a new gift package. A cylindrical glass perfume bottle, set in a plastic base and topped by a plastic star, forms the tree trunk. The whole is given an illuminated effect by the fluorescent material which consists of a single strip worked into curves in modern interpretation of a tree. It comes in three color combinations, orange branches, blue star, blue trunk; green branches, green truck and red star, and red branches, pink trunk, green star. These trees are available with three de Raymond fragrances, Mimzy, Pinx or Deviltry.

SCENTED LINGERIE: What appears to be rather an interesting idea and one with possibilities, has been introduced in the way of perfume scented lingerie. The scent of a perfume has been infused into the fabric itself. Rayon satin and crepe slips and gowns have been impregnated with a fragrance advertised as "Le Chalet" by makers of Ro-Jene lingerie. Advertisements on the subject assure the reader that "The fragrance lingers even after four or five washings." Although this lingerie has only been selling for a very short time, toilet goods departments have had calls for the "Le Chalet" fragrance in perfume. This is excellent proof that Lingerie can sell perfume and vice-versa! Apparently the "Le Chalet" fragrance is one especially created for these promotions. The idea no doubt occurred to the originator as an extra sales punch for Christmas underwear promotions and probably no further thought was given to its possibilities. However, the idea is a clever one and might well be more than just a temporary fad, especially since these scented lingerie promotions have been so successful. Perfume fragrances that are nationally known could well be used in this connection so that a woman could have her lingerie scented in her favorite perfume, or on the other hand, it may serve to introduce to her fragrances which she knows well enough but has never actually bought at the perfume counter. If the perfume fragrances could be maintained in their original form for several washings, it certainly sounds like a grand idea for further consideration. In any case, add this to the collection of "Sell by Smell" success stories.

TEEN-AGE MARKET: The teen-age market for cosmetics is apparently in hand lotions, shampoos, nail polish, bath powder, and perfume, in that order, according to the analysis of buying habits of over 25,000 teen-age girls made by The American Girl. From 79.7 to 73.5 per cent. said they used these products. Only 54 per cent. reported using face powder and 52 per cent. cold cream which are the largest volume items in the general cosmetic sales picture.

ARDEN MERCHANDISING: Some of the testimony taken by the Federal Trade Commission in its delving into the Arden policies on demonstrators may well be of interest to others who merchandise cosmetics.

The testimony indicated that where a full-time, full-salaried demonstrator was requested by a retail account the following considerations ruled: The store should purchase at least $10,000 worth, wholesale, of Arden products annually; should carry a representative stock of such products, ranging from $2,000 to $3,000 immediately; should give display satisfactory to Arden officials; should use advertising, paid for on a 50-50 basis, running up to 10 per cent. of the annual purchases; should furnish a weekly report on the services of the demonstrator, who must be permitted to receive the literature sent out by the Arden organization.

The Arden testimony emphasized that the demonstrators were intended to educate the public to the newest in fashion trends and the use of cosmetics, and not primarily to make sales.

It further disclosed that the Arden Sales Corporation now has in effect a scale of discounts as follows: Forty per cent. from the retail price for stores buying more than $7,500 annually; 33⅓ plus 5, or the equivalent of 37 per cent., on purchases up to $7,500. A discount of 33⅓ per cent. is given to stores in the metropolitan area to which deliveries are made. Stores of the Walgreen, Liggett and Whelan chains receive a discount of 40 per cent. regardless of volume. Sales are usually made to the various stores of these chains, except in the case of Walgreen, in which some shipments are made to the Chicago warehouse.

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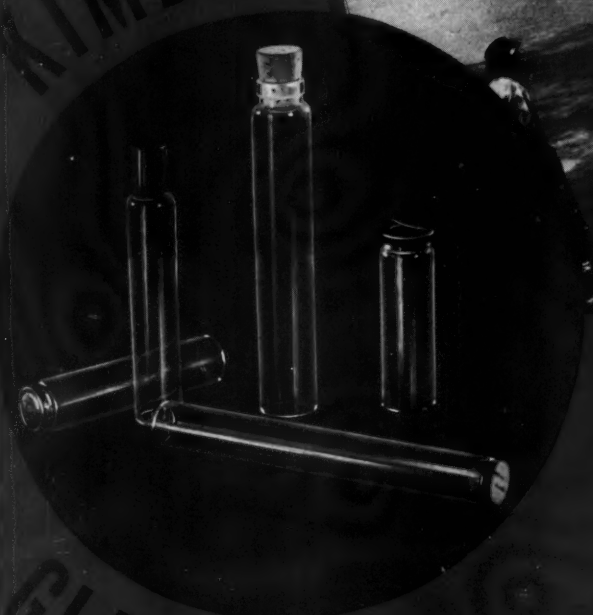
KIMBLE



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ALKALOIDS
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Check first with Penick for your needs of:

ACONITINE
Potent Crystal—Mild Amorphous
ARECOLINE
Arecoline—Hydrobromide N.F.
ATROPINE U.S.P.
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Bisulphate—Hydrochloride—Sulphate
COLCHICINE U.S.P.
Colchicine Salicylate (so called)
EMETINE
Emetine Hydrochloride U.S.P.
EPHEDRINE U.S.P.
Benzoate—Hydrochloride U.S.P.—Sulphate U.S.P.
ESERINE
Salicylate U.S.P.—Sulphate U.S.P. VIII
HOMATROPINE
Homatropine Hydrobromide U.S.P.
HYDRASTINE
Hydrochloride N.F.—Sulphate
HYOSCINE
Hyoscine Hydrobromide U.S.P.
HYOSCYAMINE
Hydrobromide U.S.P.X. Sulphate
LOBELINE
Lobeline Sulphate
PILOCARPINE
Hydrochloride N.F.—Nitrate U.S.P.
SPARTEINE
Sparteine Sulphate N.F.
VERATRINE
YOHIMBINE
Yohimbine Hydrochloride

And also other plant products:

ALLANTOIN
CANTHARIDIN
CHRYSAROBIN U.S.P.
DIGITALIN N.N.R.
(So-called German Process)
DIGITONIN
SALICIN N.F.
SAPONIN
STROPHANTHIN (K) U.S.P.
QUASSIN

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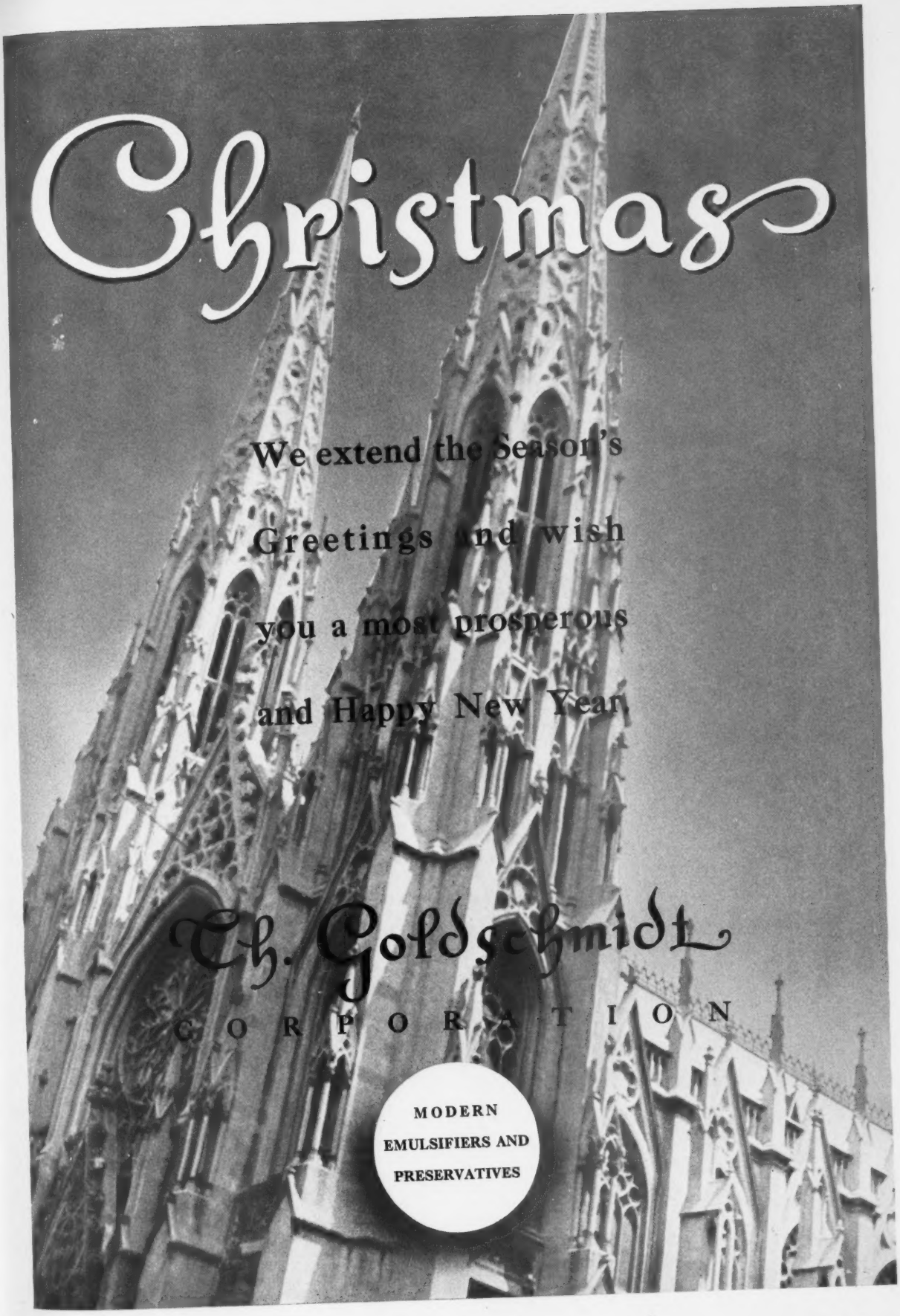
It is only natural that users of plant alkaloids, glucosides, resins and other chemicals of botanical origin should turn to S. B. Penick & Company as a logical source of supply. Well steeped in botanical knowledge and experience, Penick makes available botanically-derived drugs that meet the highest possible standards. Not contented with the most painstaking potency assays, Penick scientists make sure of additional important requirements such as color, odor, solubility, melting point, optical activity, etc.

YOUR GUARANTEE of QUALITY ALKALOIDS An unrivalled stock of fresh botanical raw materials . . . a staff of technically trained men utilizing the most modern manufacturing and production equipment . . . separate control and research laboratories . . . all combine to form YOUR GUARANTEE of the utmost in purity, potency, and standardization. When you use alkaloids manufactured by Penick, you can place YOUR label over the Penick label with full confidence.

S. B. PENICK & COMPANY

132 NASSAU STREET, NEW YORK
1228 W. KINZIE STREET, CHICAGO

THE WORLD'S LARGEST BOTANICAL DRUG HOUSE


Christmas
We extend the Season's
Greetings and wish
you a most prosperous
and Happy New Year
Th. Goldschmidt
CORPORATION
MODERN
EMULSIFIERS AND
PRESERVATIVES

Now!

A DOMESTIC SOURCE OF SUPPLY FOR *INDOL*

● *This announcement of Indol marks another achievement in Du Pont chemical research. It is in keeping with the Du Pont policy to provide a dependable source of supply for high quality materials at reasonable prices.* ☆☆☆ *This is the first production of Indol in the United States. Du Pont Indol is fully equivalent in purity, strength and odor to the product previously available. All users of this important perfume ingredient will find that Du Pont Indol fully meets their needs.* ☆☆☆ *For further information, sample and price, write Du Pont Aromatics Section, 40 Worth Street, New York City.*

DU PONT
REG. U. S. PAT. OFF.

Aromatics

E. I. DU PONT DE NEMOURS & CO. (INC.), ORGANIC CHEMICALS DEPARTMENT, FINE CHEMICALS DIVISION, WILMINGTON, DELAWARE

SACCHARINE DISPENSER: Illustrated nearby is a very ingenious dispenser for any powdered or granular drug whose dosage is measured in minute quantities. The container is about two and a quarter inches long, molded, and with a metal slide which may

be forced forward against a concealed spring far enough to make the under-side of the slide project beyond the edge of the container like a tongue. This tongue contains a small pocket in which the proper dosage is carried. After the dose has been taken the tongue goes back into place, the pocket is gravity filled and you're all set for the next dose.

GALA PERFORMANCE: With the possibility of American perfumes coming into their own, it is interesting to note the packaging trend. Helena Rubinstein's newest perfume presentation "Gala Performance" seems to be a good example. Instead of the more conventional bottle, a figure is used in the packaging of both the perfume and the eau de toilette. The ballet-dancer bottle holding the Gala Performance perfume might well belong to a collection of rare bottles, although in reality a machine made product. The pirouetting figure wears the classic ballet short flaring "tutu" skirt. The dancing bottle is posed on a base of blue velvet and reflected softly in the blue mirrored background of the box which has a transparent front. The fragrance, which is described as a combination of the sweet freshness of the floral odors with the headiness of the heavier Oriental type fragrances, retails at $25. In order also to have Gala Performance at a budget price, it has been created in an eau de toilette essence. It is really a perfume—just somewhat lighter than the Gala Performance perfume, and good for daytime and informal wear. It is priced at $10 for 5½ ounces. This is encased in a handsome wide-skirted ballet dancer bottle of the romantic ballet period, and makes a very showy gift at $10.

The trend for this type packaging in the higher price brackets probably dates right back to the introduction of Schiaparelli's "Shocking" in the dressmaker dummy form. Rubinstein used it successfully with "Slumber Song" some time ago. This novelty type of packaging is also interesting because it lends itself to special promotions and tie-ups with other departments in the stores—an important factor in merchandising these days.

A.R.P.: Undaunted by bombs, British drug merchandisers use even the familiar A.R.P. initials to help promote sales. Radio Malt, for example, in its advertising first stresses the value of its product particularly under rationing conditions and then advises the retail druggist, or chemist as the British have it, that Radio Malt's latest display material protects windows and helps sales. The Radio Malt trade-mark, it might be mentioned in passing, is a sunburst and as the copy goes on to suggest: "To help build your sales of Radio-Malt and to contribute to war-time safety we have incorporated Radio-Malt publicity matter in an anti-splinter window device. The material is attractive and bold—yet dignified enough for any window. The paper of the device is gummed and varnished and is affixed to the OUTSIDE of the window. Supplied in sufficient quantity to permit alternative arrangements from the three standard designs suggested. One or more packages *free* to any pharmacist on request."

TRADE NAMES: We had thought that no industry was more trade name conscious than this one what with new lipsticks, new perfumes, new nail polishes and new shades being introduced at a great rate. It comes as something of a shock, therefore, to discover that the motion picture industry, no less, has its trade mark problems in large number.

The fact is, according to the December 1 issue of "Tide," that "the American manufacturer who spends the most time thinking up product names is very probably Metro-Goldwyn-Mayer. Everyday articles like tooth paste and cigarets and baked beans are forever cropping up in movie scripts. As often as not the line is cut out or the label is turned away from the camera in the final version, but the company takes no chances. It would be impolitic to use a real product when the mention is favorable, and considerably less than that when the actor screws up his face and registers disgust.

"In either case M-G-M turns the matter over to a pair of specialists named Jack Sonberg and Emanuel Gross, who work under research chief W. D. Kelly in the New York office. Sonberg has been at this sort of thing for 10 years, Gross for six. They began keeping records only a couple of years ago; in that time their output of trade names has run well up in the hundreds.

"Sonberg and Gross generally give the studio a choice of at least two product names, such as Subtlety and Night of Love perfumes for 'The Women,' and Joyful Rest Springs and Dozeasy mattresses for 'Two Girls On Broadway.'"

"Indurite" HELPS SALES

Scovill
MANUFACTURING COMPANY
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If lightness in weight, brilliant permanent color, and high resistance to damage are sales helps — you will be interested in samples of Scovill's "Indurite"* finish on containers and closures made from aluminum.

For "Indurite" finish is an integral part of the metal surface, and is unusually resistant to damage from scratching, perspiration, heat, cold, perfume, and alcohol. "Indurite" is available in a full range of colors, in solid or two-tone effects, as well as metallic colors such as bronze, silver and gold.

SCOVILL WORKS IN MANY METALS — OFFERS MANY SERVICES

While "Indurite" finish is applicable to cosmetic containers and closures made from aluminum only, Scovill is also experienced in applying new, sales-building designs to other metals (brass, copper and nickel-silver) and to metal plastic combinations as well.

Your product may be specified as "aluminum," suitable for some "Indurited" design — or it may be just "a container," to be designed from the ground up — in either case, Scovill's designing and engineering skill is available to you as part of Scovill's complete manufacturing service. From creating an original design to assisting at the blueprint or model stage, Scovill's salesminded specialists are ready to work with you — to secure economical production.

Whatever your type of manufacturing problem, Scovill styling and low cost production may be the answer. Ask the nearest sales office listed below or write to Scovill Manufacturing Company, Drug and Cosmetic Container Division, 69 Mill Street, Waterbury, Connecticut.

*Reg. U. S. Pat. Off. by Scovill

Boston, Providence, New York, Philadelphia, Syracuse, Pittsburgh, Chicago, Cincinnati, San Francisco, Los Angeles
IN CANADA: 334 King Street, East, Toronto, Ontario

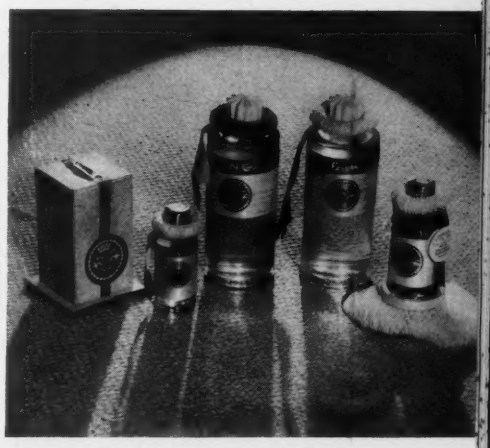
NORWICH PHARMACAL CO.

The newest package evolved by the Norwich Pharmacal Co. for carrying its Vitamin A capsules is a convenient flat molded one. The bottom is black and the top transparent. Capsules form the letter "A" in cutout cardboard and the small descriptive folder is also attached to a card form—each of a different depth to insure a close fit with the top and thereby eliminate movement of capsules or folder when box is closed.

NORWICH PHARMACAL CO.

ROYAL POLYNESIAN PERFUMERS

Royal Polynesian Perfumers are offering the "Princess Laniloa" line of perfumes and colognes, made in Honolulu. The bottles are covered with a fiber obtained from Tahiti, and the base of the perfume "Coral Isle" is white mushroom coral from the Hawaiian Isles. The boxes are covered with genuine old Hawaiian tapa. The fragrances are known as: Trade Wind, Tonga, Tiare Tahiti, Coral Isle and White Ginger Blossom.



ROYAL POLYNESIAN PERFUMERS

HELENA RUBINSTEIN

Helena Rubinstein's perfume presentation, Gala Performance, is a combination of the sweetness of the floral fragrance and the headiness of the Oriental. Gala Performance has been encased in a ballet-dancer bottle. The pirouetting figure wears the classic ballet short flaring skirt. The bottle is posed on a base of blue velvet and reflected softly in the blue mirrored background of the box which has a transparent front.

HELENA RUBINSTEIN

XANDRA

Xandra has added to her original Sea Bath a group of body products which pick up the treatment where the bath ends and carry through to the ultimate in body care. These include: a friction mitt with individual Sea Moss soapsacks for cleansing of the skin in either tub or shower; an astringent friction for a vigorous rub; an emollient lotion; a combination of liquid powder and eau de cologne which is a general deodorant for the body, and a body powder.

XANDRA

MARIE EARLE

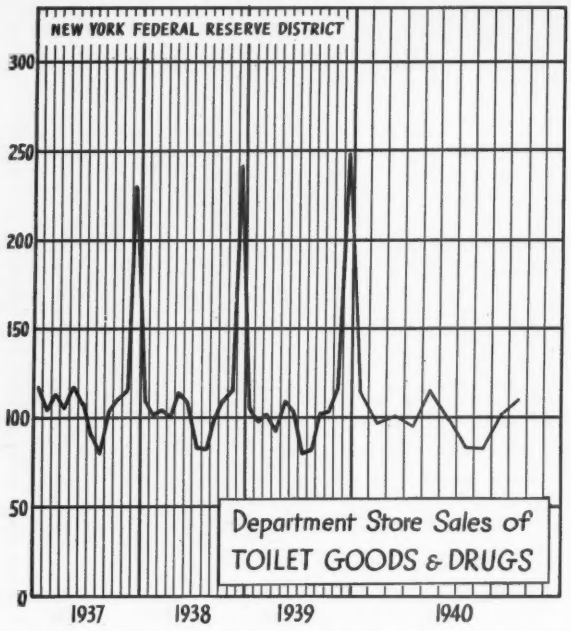
Marie Earle's "Indispensable" is aptly named. It is an imported morocco leather pouch, beautifully lined, which holds compact, rouge and lipstick, designed in matching enamel and gold.

MARIE EARLE

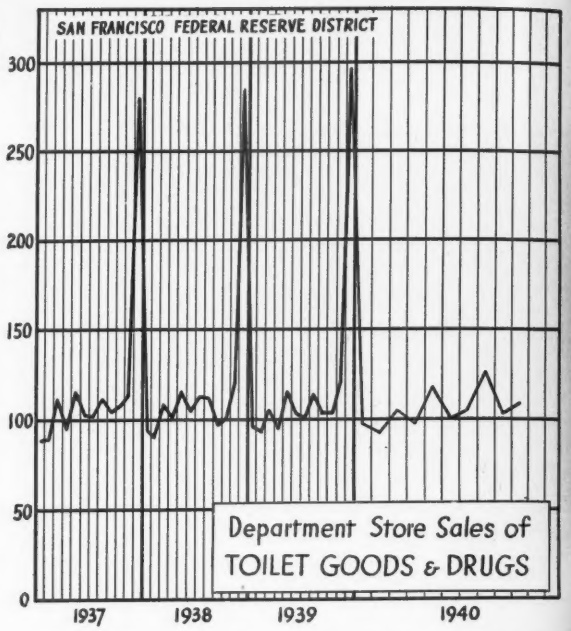
MAGGY NEY

Maggy Ney has introduced a solid perfume in lipstick form—convenient, dry, greaseless—and there can be no loss from spilling. It is available in four fragrances, Wisp, Dzan, Saska and Faun.

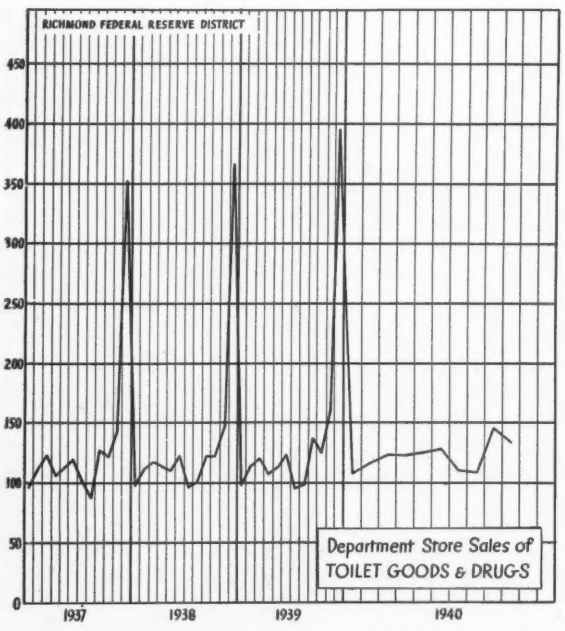
MAGGY NEY



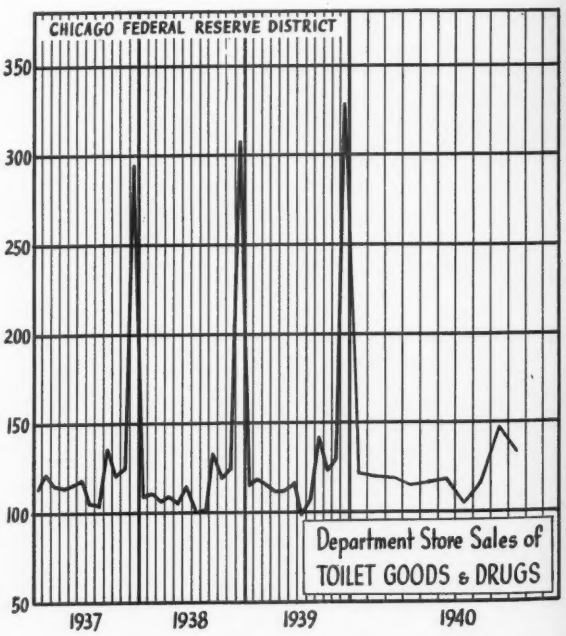
Sales of toilet articles and drug sundries by department stores in the New York Federal Reserve District were 6.1 per cent. greater in October 1940 than in the same month of 1939. This corresponds to unadjusted index numbers of 109.7 for October 1940, 101.3 for Setpember 1940, and 103.4 for October 1939.



Sales of toilet articles and drug sundries by department stores in Los Angeles were 4 per cent. higher, in San Francisco were 4 per cent. higher, in the stores of the Pacific Northwest were 6 per cent. higher and for the whole San Francisco Federal Reserve District averaged 5 per cent. higher in October 1940 than in October 1939. For the whole district this corresponds to unadjusted index numbers of 109.4 for October 1940, 103.7 for September 1940, and 104.2 for October 1939.



Sales of toilet articles and preparations by department stores in Washington were 7 per cent. higher, in Baltimore were 8 per cent. higher, and for the whole Richmond Federal Reserve District averaged 7 per cent. higher in October 1940 than in October 1939. For the whole district this corresponds to unadjusted index numbers of 133.5 for October 1940, 145.7 for September 1940, and 124.8 for October 1939.



Sales of toilet goods and drugs by department stores in the Chicago Federal Reserve District were 7.9 per cent. higher in October 1940 than in October 1939. Corresponding unadjusted index numbers were 133.5 for October 1940, 147.7 for September 1940, and 123.7 for October 1939.

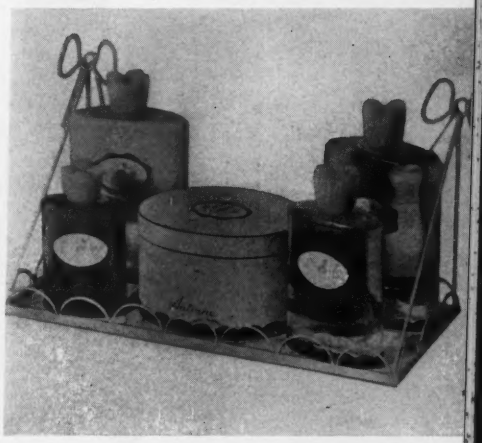
PEGGY SAGE

Peggy Sage's flowered set with its pink quilted top, is called the Mademoiselle, because it is grand as a girl's first manicure kit. Powder polish and a buffer are included in order to start the young girl right in her nail-caring ways. There is a soft shade of liquid polish, too, for parties, and all the essentials to learning that a manicure means a lot more than color for the fingertips.

PEGGY SAGE

ANTOINE

Antoine, for the first time in many years, has made an addition to the collection of Antoine beauty preparations. The new Antoine Nuance bath preparations are handsomely packaged. Smart petal-pink and jet black are the refreshing color notes in the Nuance containers, with gay, little floral-medallion labels to add that Parisian touch. Seven products make up the Antoine Nuance collection; eau de cologne, bubble bath, a special body lotion, a body freshener, bath oil, dusting powder and face powder.



ANTOINE

WOODBURY

Woodbury has announced a new foundation cream in 10, 25 and 50 cent jars. It supplements other Woodbury creams designed to fill the need of various types of skin.

WOODBURY

DELETTREZ

Windy Day Lotion by Delettrez is a body and hand lotion, delicate pink in color and subtly fragrant. Delettrez suggests it for body massage, legs, and hands to banish chap and roughness. It comes in an eight-ounce bottle.

DELETTREZ

PARALENE PRODUCTS CO.

The Paralene Products Co. has introduced Paralene cleansing cream (a petroleum product) described as a water soluble cleansing and corrective cream, and Paralene shampoo, "a corrective petroleum soap shampoo." The maker of Paralene has deliberately presented these preparations in strictly utilitarian form.

PARALENE PRODUCTS CO.

L. R. KALLMAN & CO.

Chin-Up, distributed by L. R. Kallman & Co., is a preparation which is applied to the skin with a brush and is designed to help constrict flabby or crepey skin about the neck and throat. It is said to do everything that a chin strap does, and in addition the ingredients contained in it tend to help firm the skin. Using the applicator brush which comes with it, the preparation is painted on the crepey skin or flabby tissue of the neck or chin and allowed to remain on the skin for 25 minutes. It is then removed with cold water.

L. R. KALLMAN & CO.

CETOPHENETIDIN U.S.P.

(PHENACETIN)

Monsanto Acetophenetidin has become established through many years of satisfactory performance, beginning in 1906 when Monsanto became the first American manufacturer.

Today, Monsanto enjoys the additional distinction of being the *largest* maker of this well-known medicinal.

Under a competitive system there can be no greater expression of confidence in a product or a manufacturer.

MONSANTO CHEMICAL COMPANY, St. Louis, U.S.A. District Offices: New York, Chicago, Boston, Detroit, Charlotte, Birmingham, Los Angeles, San Francisco, Montreal, London.

SPECIFICATIONS OF MONSANTO ACETOPHENETIDIN
(ACETOPHENETIDIN U. S. P.)

White crystals or crystalline powder.
Odorless.
Ash: 0.05% max.
Free of paraphenetidin and carbonizable impurities.
Melting point: 135.0° C. minimum.
Fineness: Powder, 100 mesh.

MONSANTO CHEMICALS
SERVING INDUSTRY...WHICH SERVES MANKIND

F.D.A. Warning Revisions

THE FOOD AND DRUG ADMINISTRATION HAS REISSUED its list of warning statements required under Section 502(f) (2) of the Food, Drug, and Cosmetic Act. There are very few changes in this new list. Since the old list was published in our January 1940 issue, and republished in our May 1940 issue, we are only giving the revisions and additions.

The Mineral oil waring remains the same: "Important—Do not take directly before or after meals." But the following note is added to the list:

"There will be no objection to an explanation added to the above statement indicating that mineral oil may interfere with the absorption of pro-vitamin A, carotene, and other substances."

The warning for nose drops, inhalants and sprays that contain oil as a vehicle or base has been changed slightly and is now in the following form:

"Caution: Frequent or excessive use of this preparation may cause injury to the lungs. Do not use at all in infants and younger children except on competent advice."

A note is given with the warning required on nose drops, inhalants and sprays that contain ephedrine, epinephrine, amphetamine (benzidrine), prepadrine, neosynephrin, and other vaso-constricting drugs of similar activity. The warning is repeated below and the note added is given:

"Caution: Frequent or continued use may cause nervousness, restlessness or sleeplessness. Individuals suffering from high blood pressure, heart disease, diabetes, or thyroid trouble should not use this preparation except on competent advice."

Note: The above warning may also be appropriate for the same ingredients intended for internal administration. However, amphetamine (benzedrine) indiscriminately distributed and intended for its systemic effect is dangerous.

The warning for atropine, hyoscyamine, scopolamine, and pharmacologically related drugs is slightly revised as follows:

"Caution: Frequent or continued use of this preparation should be avoided. Use cautiously if dryness of the throat occurs; discontinue if rapid pulse or blurring of vision appears.

"Warning: This preparation should not be taken by elderly people except on competent advice."

The warning for preparations sold under representations relating to coughs due to colds is revised to the following form:

"Important: Persistent coughs may indicate the presence of a serious condition. Do not use this preparation if there is a high fever or the cough has persisted for 10 days without securing medical advice."

The warning for mercury preparations intended for application to the skin remains unchanged but a note has been added. The warning and the note follow:

"Warning: This preparation may cause irritation of the skin and the application to large areas may cause serious mercury poisoning."

Note: This warning is not applicable to mercury bleach creams. See Notice to Manufacturers of Mercury Bleach Creams of May 13, 1939.

The notice of May 13, 1939 referred to above follows in part:

"Mercury preparations represented as bleaching agents or to remove, prevent, or cure tan or freckles*** (containing) large amounts of mercury are being proceeded against B***. *** Products which contain 5 per cent. or less of ammoniated mercury may not violate the statute if the bear conspicuous warnings designated to acquaint purchasers with the fact that if skin irritation appears after application, use of the product should be immediately discontinued, that such articles should not be applied to irritated or damaged skin, such as cut, bruised, sunburned, or sore skin, after shaving, or after using a dipilatory, that prolonged use may produce unsightly discoloration, and that application to a large area of the body is dangerous."

The warning for digitalis, strophanthus, and pharmacologically related drugs in therapeutically effective proportions are not changed, but a new alternative warning statement is given. We repeat the old style warning, with the alternative given at the end:

Note: Potent doses of these drugs have cumulative action and may lead to disastrous effects upon the heart and circulation. They should be used only under the direct supervision of a qualified physician.

"Caution should be exercised in using this preparation, particularly if the patient has had digitalis, squill, strophanthus, ouabain or similar drug within the preceding three weeks.

"The appearance of anorexia (loss of appetite), nausea, vomiting, headaches or heart irregularities (palpitation) is often an early sign of full digitalization or overdosage. When such symptoms appear, do not continue the use of this preparation without consulting the physician."

or

"Caution: this drug requires careful and accurate dosage under the guidance of a physician. The appearance of anorexia (loss of appetite), nausea, vomiting, headaches or heart irregularities (palpitation) often indicates either full digitalization or overdosage. When such symptoms appear, do not continue to use this preparation without first consulting the physician."

F.D.A. and F.T.C. Activities

F.D.A. Opinions

Misleading Name

The name "Bellaphen" may mislead by creating the impression that the article contains belladonna, whereas, it contains a mixture of alkaloids which are found in belladonna. This criticism is particularly pertinent since it has not been established that the alkaloids are present in the preparation in the same proportions as they occur in belladonna.

If phenothiazine is bought from a manufacturer who has an effective new drug application on file with the Administrator, it may be possible to satisfy the requirements of section 505(b) (1) and (4) by securing a statement from that manufacturer authorizing consideration of the information submitted by that firm as a part of your application. Until your application has been completed it may not be filed with the Administrator for consideration.

All Ingredients for Doctor

Declaration of gluconic acid in the manner which appears on the proposed labels accompanying your application may readily create the unwarranted impression that it is an active ingredient. If a chemical reaction has taken place between the ephedrine alkaloid and the gluconic acid, you should declare the resulting active ingredient. Since the labeling for this drug does not bear directions for use but leaves it to the physician to determine how the drug should be used, it appears necessary that the physician be provided with full information regarding its composition, including the identity and amount of the preservative and the flavoring oil it contains.

Tests Must Be Revealed

In the application it is stated that upon completion of manufacture a sample of the product is sent to your control laboratory for assay. Since this is a parenteral preparation, we assume that assay in this case includes appropriate investigations to determine that the preparation is sterile. However, it is essential to a final consideration of the safety of this preparation that you provide us with a detailed description of the sterility tests you employ. Any representation that this preparation is effective in the prevention or treatment of necrotic enteritis in swine must be made entirely on your own responsibility. It is noted that the proposed labels accompanying this application carry the statement, "CAUTION: To be used only by or on the prescription of a veterinarian," and also, under the heading "Dosage," detailed instructions for the administration of the preparation. Veterinarians will be familiar with the doses of sodium nicotinate which should be administered to swine and, on the other hand, the giving of detailed dose recommendations on your label may readily lead to the use of the preparation without adequate supervision and thus render ineffective the cautionary statement restricting the use of the drug to veterinarians or on their prescription. It therefore appears that if you intend to in fact restrict the distribution of this preparation to use by or on the prescription of veterinarians, you should retain the cautionary statement and should delete from your label the specific recommendations with respect to dosage and method of administration.

No Dosage for Doctor

The proposed label for this preparation carries the statement "Adult Dose: One tablet as directed by physician," and also the statement, "Caution: To be used only by or on the prescription of a physician." If you intend to restrict distribution of this preparation to use by or on the prescription of physicians, you should retain the auction statement and omit from the label all recommendations with respect to dosage. As an alternative you may desire to place on your label adequate directions for use in conformity with section 502(f) (1) of the Act, in which event you should omit the caution statement restricting the use to physicians or on the prescription of physicians.

Hundreds of Cases Required

In our letter of October 27, 1939, we discussed in detail the adverse effects which may result from administration of sulfanilamide in the manner proposed in this application and pointed to the fact that withdrawal of the drug where adverse effects may appear would be for practical purposes impossible. We note in your letter that it is argued that the drug is not absorbed so that large concentrations appear in the bloodstream. There is no definite information derived by appropriate laboratory procedure to substantiate this claim. Neither is there laboratory procedure to substantiate the claim that there is a high concentration of sulfanilamide in solution in the tissue fluids at the site of the application. Also there is no indication of the effect that such concentrations, will have on the white blood cells in the vicinity of the fracture. In order to supply reports which will show that this dose form and method of use of sulfanilamide is safe it will require a very considerable number of cases, probably hundreds, which have been thoroughly studied by appropriate clinical laboratory procedure as well as clinical observations before data may be assembled which is sufficient to warrant drawing conclusions with respect to safety.

Phenobarbital Listed First

Declaration of phenobarbital should appear first in the list of ingredients on the label and should be immediately accompanied by the statement "Warning—May be habit forming."

Not Purified Bile Salts

It is apparent that designation of the active ingredient as "purified bile salts" is not appropriate since the application does not indicate that the bile salts are in their pure form but are a naturally-occurring mixture of bile salts extracted from bile. It would appear, therefore, that declaration of this ingredient in compliance with section 502(e) of the Act would require a statement somewhat as follows: "A mixture of partially purified bile salts, 5 grains." Since the therapeutic function of this tablet would be that of a cathartic or laxative you should give consideration to the adoption of an appropriate warning such as is indicated under numbered paragraph X of the enclosed memorandum of warning statements.

State Source of Hormone

Since the gonadotropic principle is readily available from sources other than human pregnancy urine and since in your preparation you do not have the pure gonadotropin, it appears that it is necessary for you to declare, as required by section 502(e) of the Act, the common name of the active ingredient which is the "gonadotropic principle from human pregnancy urine."

Report on Cases Required

According to the application this preparation is intended to be used with an applicator. This applicator consists of a glass tube containing gauze to be impregnated with the solution and connected by means of a rubber tube with a mouthpiece. According to the directions, one end of the tube containing the medicament is to be placed in the nostril and the mouthpiece placed between the lips and air blown through the apparatus. It is the consensus of medical opinion that the use of devices of this type in connection with the inhalation of medicinal vapors is

Albert Verley, Inc.

suggests

a new look at

GARDENIA

—and a careful study of Gardenia A.V.
as a component of *successful floral odors*

Interest in Gardenia now centers in its contribution to fashionable floral bouquets and to a variety of floral odors. . . . Viewed in this light, Gardenia compositions and blends assume new importance to the perfumer. . . . For example, Gardenia A. V. is not only a true reproduction of the flower — it is extremely valuable in bouquets, and for special effects in the fabrication of Lilac, Lily, Rose, and Jasmin compositions. . . . In cream odors especially — where Gardenia enjoys consistent popularity — we recommend the incorporation of this appealing Gardenia note in your original creation. Write today for working samples and prices.

Recommended

for success with the Gardenia note

- GARDENIA A. V.
- GARDENIA 675
- GARDENIA 227
- GARDENIA B-362
- GARDENIA N-100
- LINALYL BENZOATE
- ALDEHYDE C-14
- LINALYL ANTHRANILATE
- ALDEHYDE C-18
- PHENYLETHYL ANTHRANILATE
- TUBEROGENE

ALBERT VERLEY *aromatics*

ALBERT VERLEY, INC., D. A. Bennett, *President*, 1621 Carroll Avenue, Chicago, Illinois
114 E. 25th Street, New York • Mefford Chemical Co., Los Angeles

Step up your holiday business

with **Albert Verley, Inc's** new

BOUQUET X-105

—an exotic perfume of original character and distinction, for your most fastidious trade

As a high-fashion leader — an appreciated gift — and a credit to your house — we suggest Verley's Bouquet X-105 — a new and original perfume of the Ambre and Oriental type . . . suitable for use with furs and winter costumes generally . . . Into this superb odor we have put some of our finest new creations in aromatics. It satisfies the most critical and informed taste . . . with its marvelous balance . . . its wonderful tenacity . . . its complete expression of the fashion trend of the day . . . There is ample time to consider Bouquet X-105 for your holiday season. Write today for working samples and prices.

TURN the PAGE

ALBERT VERLEY *aromatics*

ALBERT VERLEY, INC., D. A. Bennett, *President*, 1621 Carroll Avenue, Chicago, Illinois
114 E. 25th Street, New York • Melford Chemical Co., Los Angeles

capable of producing injury, in that the pressure created may cause an extension of any infection which is present into the sinuses and the eustachian tubes. It will therefore be necessary for you to submit reports of experts qualified by training and experience to investigate the safety of drugs which will conclusively show that your preparation when used in connection with the applicator will not produce harm. These reports should provide detailed information regarding the number of individuals treated with the drug and device, the diseases from which these individuals were suffering, the frequency, duration and exact manner of use of the device, and complete details regarding the observations which were made to determine that the patients had not been injured.

Vitamin B_1 and Anorexia

In order that references to the prevention and treatment of anorexia and to the use of vitamin B_1 in the treatment of subnormal growth may not mislead, it appears necessary that the proposed circular labeling clearly explain that anorexia and subnormal growth may arise from a number of conditions other than vitamin B_1 deficiency, and it should also explain that administration of this preparation in treatment of these conditions would be of no value except in those relatively infrequent cases which arise from a deficiency of vitamin B_1 in the diet. The statement in the circular, "But symptoms of moderate insufficiency are by some investigators thought to be prevalent, chief of these being connected with the gastro-intestinal tract, the neuromuscular control of which is impaired," is capable of creating a misleading impression with respect to prevalence of vitamin B_1 deficiency in this country and with respect to causative relationship existing between such deficiency and the gastro-intestinal disturbances which are commonly met with. This statement should be deleted from the label or should be appropriately modified.

Must Identify Preservative

If the label for this preparation is to carry any reference to the preservative contained in it, this ingredient should be declared by its common name, H-butyl parahydroxybenzoate, in order that such declaration may be fully informative.

In the opinion of this Administration the proposed circular labeling which you offer as part of the labeling for Sulfapyridine Tablets is insufficient. The principal reason for a circular is to give exact and specific information to the practitioner so that he will know exactly what to do in order to detect at the earliest possible moment adverse effects of the drug. The circular should also state exactly what he should do when these adverse effects are discovered. Because of this we think that your circular should more exactly and specifically deal with the adverse effects of Sulfapyridine and how to avoid them. It should also give in sufficient detail the recognized test methods for determination of free and total Sulfapyridine in blood and urine so as to enable the practitioner to stay within concentrations in the blood which are recognized as safe.

Synthetic Vitamin Must be Named

Under section 502(e) of the Act the ingredient, activated ergosterol, should be declared on your label as such, to be followed, if you wish, by a statement to the effect that this ingredient provides a certain number of units of vitamin D.

Tell That It Is Painful

Since intramuscular or subcutaneous administration of this drug is painful, it appears that this fact should be pointed out immediately in connection with statements on the ampul label and the carton label suggesting intramuscular injection. These statements should be in addition to that which appears in the proposed package insert.

Drop "Modified" with Old Product

The word "Modified" appearing on the proposed labeling for the preparation should be deleted since from the context of your letter it appears definite that you intend to discontinue the old preparation.

Source and Process of Vitamins

In order to complete this application with respect to section 505(b) (2) (3) of the Act it will be necessary to provide full information regarding the identity and composition of the ingredient which you refer to as "vitamin A concentrate." Information submitted should indicate the source of this ingredient, the process by which it was prepared, and complete information regarding its composition, including both its vitamin A and its vitamin D content.

F.T.C. Complaints

Bowe's Tablets

The F. T. C. has issued a complaint against R. G. Bowe and W. W. Hartman, trading as Bowe & Hartman, Toledo.

In the sale of "Bowe's Tablets," respondents are alleged to disseminate advertisements in which they represent that ulcers of the stomach, duodenum and intestines, gas on the stomach, sour stomach, indigestion, heartburn, constipation, nausea, pains around the heart, muscular pains, nervousness, melancholia, colds, headaches, dizziness, fatigue, lack of appetite, bad breath and insomnia are due to hyperacidity or the presence of excess acid, and that their preparation is a cure or remedy for hyperacidity and thereby constitutes a cure or remedy for the specific ailments and conditions mentioned.

The complaint alleges that, in truth, while gastric hyperacidity may be associated with the illnesses mentioned, it is not the cause of such conditions, nor do they persist solely because of hyperacidity. Although the respondents' product will assist in temporary neutralization of gastric hyperacidity, it does not constitute a cure or remedy for any of the conditions enumerated.

The complaint further alleges that the preparation possesses no therapeutic value in the treatment of the conditions mentioned in excess of such temporary and palliative relief as it may afford in those instances where gastric hyperacidity is a concomitant factor.

Chocolate Vitamin Syrup

Chocolate Products Company, Chicago, is charged with misrepresentation of a chocolate syrup designated "Stillicious Vitamix," alleged to contain Vitamins A, B, D and G. The product was formerly known as "Stillicious Vitamin A, B, D."

The complaint alleges that respondent sells its product in small containers to wholesale and retail dealers and in large quantities to dairies. The dairies, according to the complaint, use the product in making bottled chocolate drinks or beverages which, pursuant to agreement with the respondent, are sold to the public under the trade name "Stillicious."

In advertisements the respondent represents that the chocolate drinks or beverages made by the dairies with the respondent's product and sold by the dairies under the name "Stillicious," are made with milk. The complaint alleges that the milk content is not in any case whole milk but is skimmed milk or a mixture of whole milk and skimmed milk.

The complaint further alleges that the respondent disseminates advertisements representing, contrary to fact, that its product, by reason of the Vitamin A content, helps to build resistance to colds and infection. The complaint alleges that even in exceptional cases where persons suffer from a recognizable deficiency of Vitamin A, the quantity of that vitamin in the respondent's product is insufficient to overcome such deficiency or afford substantial assistance in building resistance to colds or infection.

Just Mild Diuretic

Charles Keller, doing business as Sorbol Company and as Keller Company, Mechanicsburg, Ohio, engaged in distribution of two medicinals is charged with misrepresentation.

The complaint alleges that the respondent has represented that "Sorbol-Quad-

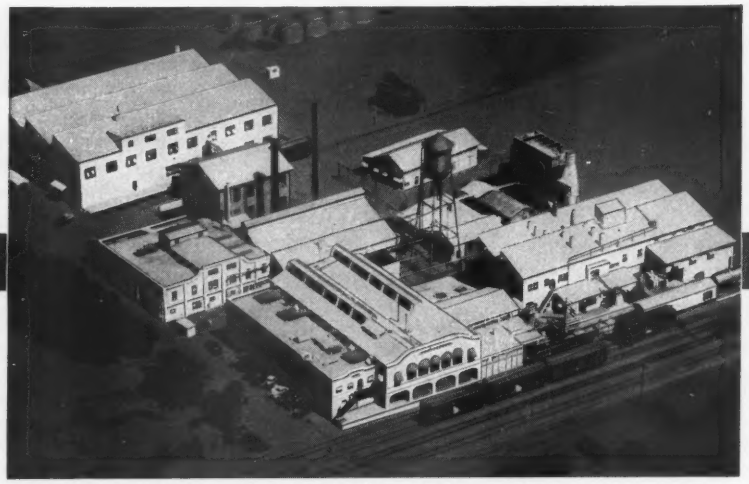
Exchange BRAND

Citric Acid

U·S·P·

CRYSTALS • GRANULAR • POWDERED

MADE IN WORLD'S LARGEST LEMON PRODUCTS PLANT
BACKED BY THE SUNKIST GROUP OF 14,000 CITRUS GROWERS



Copyright, 1940, California Fruit Growers Exchange, Products Dept.

CALIFORNIA FRUIT GROWERS EXCHANGE, PRODUCTS DEPARTMENT

189 W. MADISON ST., CHICAGO — ONTARIO, CALIFORNIA — 99 HUDSON ST., NEW YORK

IMMEDIATE DELIVERY FROM WAREHOUSE IN NEW YORK, CHICAGO, PHILADELPHIA, SAN FRANCISCO

ruple" constitutes a cure or remedy for simple goiter; possesses substantial therapeutic value in treatment of such conditions, and is entirely safe and harmless; and that "Bukets" eliminates excess acid and waste from the body and thereby constitutes a remedy for rheumatic pains, backache and leg pains.

The complaint alleges that rheumatic pains, backache and leg pains are not generally due to the presence in the body of excess acid or waste, as represented; that "Bukets" even in those cases where such conditions may be due to excess acid or waste, is of no substantial value in eliminating such excess acid or waste, and that the preparation possesses no therapeutic value in excess of that of a mild diuretic.

The complaint also alleges that "Sorbol-Quadruple" is neither a remedy for, nor possesses substantial therapeutic value in treating, goiter; nor is it safe or harmless in all cases as it contains the drug potassium iodide in a quantity sufficient to cause injury to health if taken under certain conditions.

The advertisements contain neither a statement to the effect that "Sorbol-Quadruple" should not be used by persons having goiter other than simple goiter, or by persons having tuberculosis, nor a cautionary statement to the effect that the preparation should be used only as directed on the label.

Alcoban Claims Cited

Misleading representation of a medicinal preparation is alleged in a complaint issued against Edwin L. Leisenring, trading as U. S. Drug & Sales Company, U. S. Drug Laboratories, and U. S. Drug Company, and against Gordon Leisenring, Denver.

The complaint charges respondents represented that their preparation "Alcoban" is a competent and effective treatment for alcoholism which removes desire for alcoholic stimulants and is safe and harmless.

The preparation "Alcoban," according to the complaint, will not accomplish the results claimed and is not safe or harmless as it contains certain drugs in quantities sufficient to cause serious injury to health if used under conditions prescribed in the respondents' advertisements or under customary or usual conditions.

The complaint further charges that the advertisements constitute false advertisements in that they fail to reveal that use of their preparation under such conditions may cause serious injury to the nerves, tissues and lungs, and may produce toxic conditions in the body.

Upon petition of the Commission, the respondents were restrained recently by the U. S. District Court for the District of Colorado, in a consent decree, from disseminating certain advertisements relative to their preparation pending the Commission's issuance of a complaint and its final disposition under Commission procedure.

Contraceptives

A complaint has been issued against Mrs. Anne M. Jenks, of White Bear, Minn., who trades under the names of Jenks Physicians' Supplies and Dependon Products, charging misrepresentation of medicinal preparations.

The complaint alleges that respondent has represented that her products "Dependon Vaginal Jelly" and "Dependon Vaginal Creme," provide safe, competent and dependable means of preventing conception; that "Flexible Kone Diaphragms" and "Flexible Kone Pessaries" are devices to prevent conception which can be fitted and worn continuously without danger or injury; that "Dependon Intrauterine Paste" provides a safe method of terminating pregnancy at any stage without instrumentation and eliminates danger of infection and troublesome after effects, and that this preparation is a competent and effective treatment for certain diseases of women.

The complaint further alleges that the respondent's representations are exaggerated and misleading; that "Dependon Vaginal Jelly" and "Dependon Vaginal Creme" do not constitute competent preventives against conception; that while such products may possess antiseptic and germicidal properties, they do not provide a dependable or positive method of preventing pregnancy; that "Flexible Kone Diaphragms" and "Flexible Kone Pessaries" cannot be worn without danger or injury as their prolonged use would be injurious to the tissues and cause infection; that the use of "Dependon Intrauterine Paste" does not provide a safe method for termination of pregnancy, but instead carries considerable danger of infection and is very caustic and might destroy healthy tissue.

F.T.C. Stipulations

Darmela Claims to Stop

Joseph H. Miller, trading as Darmela Laboratory, Chicago, engaged in selling "Darmela Salve" and "Darmela Liquid," has stipulated to cease representing that either of the products is a competent treatment or an effective remedy for open or running wounds or sores (skin ulcers), unless it is explained in direct connection therewith that they will be of no benefit for the condition when due to varicose veins, tuberculosis or syphilis; that either of the products is a competent treatment or an effective remedy for shingles, unless limited to the temporary relief of the pain and itching associated therewith; that Darmela Liquid is a competent treatment or an effective remedy for stiffness, numbness, paralytic stress, tooth-ache, rheumatism, back-ache, chills, and other ailments, unless limited to the temporary relief of the pain, discomfort and soreness associated therewith, or that it is a competent treatment or an effective remedy for colds or coughs.

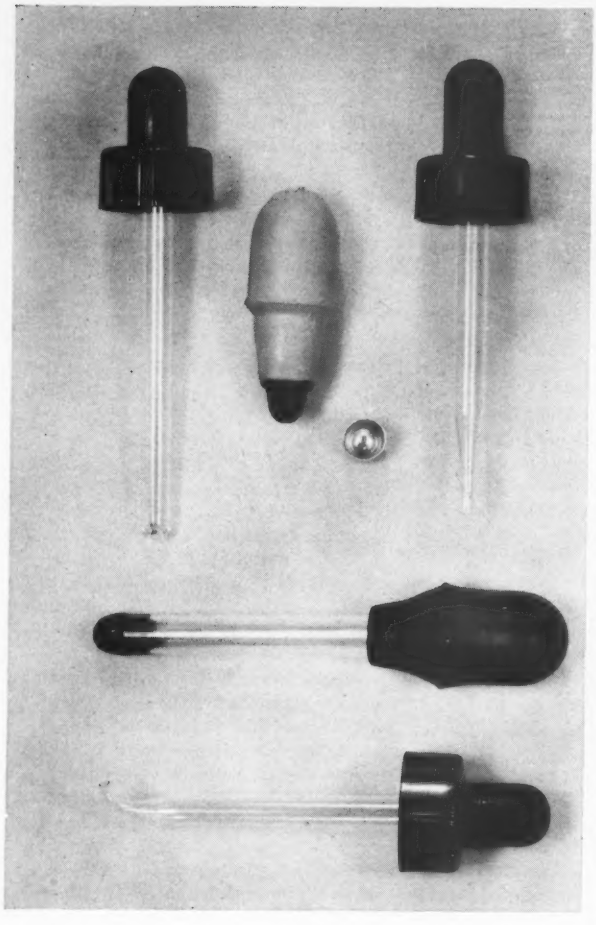
Joseph H. Miller further agrees to cease using the term "Laboratory" as a part of his trade name, or from otherwise representing or implying that he owns, controls, maintains or operates a laboratory.

Psori-Oil Claims to Stop

D. R. Parsons, Huntington, W. Va., has stipulated to cease statements which convey the belief that "Psori-Oil" or any other medicinal preparation composed of substantially similar ingredients, is a competent remedy or a "real" or effective treatment for, or will "cure" or "rid" one of psoriasis, scaly skin diseases or any other skin or scalp affliction. Respondent also agrees to cease use of the trade name "Dr. D. R. Parsons" or of any statements or representations which imply that he is a physician engaged in the practice of medicine; or any use of the word "Doctor" or the term "Dr." in his advertising matter, unless, whenever so used, it clearly appears that he is a doctor of dentistry and not of medicine; from representing that "Psori-Oil" has been recommended or endorsed by "many physicians," or otherwise implying that the preparation has received the recommendation of any number of physicians in excess of the number actually recommending or endorsing it, and from statements which imply that any testimonial letters not recently received were "just received," or disseminating or publishing testimonials without indicating the dates when they were written, or which contain any claims, assertions or implications contrary to the terms and spirit of the respondent's agreement.

Rubinoff Cosmetic Claims

Rubinoff Cosmetic Company, Inc., Cleveland, has stipulated that it will cease representations of "Mme. Rubinoff's Cosmetics." The respondent agrees to cease representing any cosmetic preparation as a "tissue cream," a "tissue builder," a "food for the skin," a "rejuvenating cream," or a "nourishing cream or oil," or otherwise representing that any of its preparations externally applied effects the texture or cell structure of the skin, or imparts renewed vitality, or provides sustenance therefor. Respondent stipulates it will cease using the term "Vitamin F" in connection with the name of any cosmetic product or as descriptive of linoleic or linolenic acids and will cease representing that an external application of chemicals or ingredients will restore a healthy and youthful skin. Respondent also agrees to desist from various representations con-



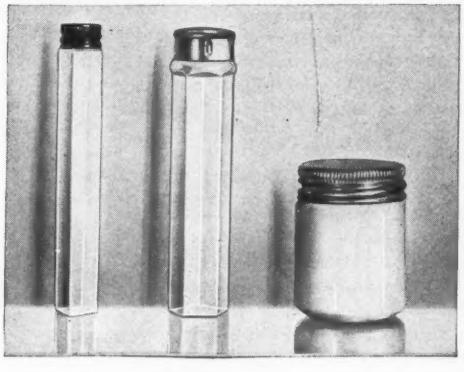
QUALITY IN ANY QUANTITY

The highest quality droppers, atomizing droppers and vest pocket atomizers are available for immediate delivery in any quantity. If you have a packaging problem why not consult us? We are specialists in the glass ware field. Write for our catalog showing the latest developments in closures, fittings and applicators; or, we will be glad to send you samples and prices.

GLASS PRODUCTS CO.
GLASSWARE
VINELAND • NEW JERSEY

★ YOUR SILENT SALESMAN! ★

Containers of HYCOLOID and CLEARSITE



Modern merchandising demands modern packaging. These containers are modern as tomorrow —handsome in appearance, in any color or color combination (opaque or transparent), in almost any shape you need (note hexagon and square), seamless and unbreakable, and

80% LIGHTER THAN GLASS

Our packaging experts will be glad to confer with you on a packaging problem with no obligation to you. Write or phone us.

CELLUPLASTIC CORPORATION

FORMERLY HYGIENIC TUBE & CONTAINER CORPORATION

Executive Offices & Factory
44 Avenue L—Newark, N. J.
Market 2-4544

FIRST IN CELLUPLASTICS
HYCOLOID - CLEARSITE

N. Y. Display Office
626 Fifth Avenue
New York City

cerning, respectively, its "Neck Cream," "Wrinkle Remover," "Acne Cream," "Russian Herb Pack" and other products and to discontinue representing by statement or inference that it owns, operates or controls a laboratory or plant in which its preparations are compounded or manufactured.

Pow-A-Tan Herb Tonic Claims

Pow-A-Tan Medicine Company, Huntington, W. Va., engaged in selling "Pow-a-tan Herb Tonic," has agreed to cease representing that its preparation is a cure remedy or competent treatment for all common ailments, rheumatism, neuritis, arthritis, indigestion, gas and bloatiness, piles, la grippe, colds, sick headache, heartburn, palpitation of the heart, weakness, tired out feeling and general run-down condition, pains in the neck, shoulders, side, back or hips, lumbago, and female complaints; that its preparation possesses any value in treatment of above symptoms or conditions in excess of such temporary relief as may be furnished by a laxative when such symptoms or conditions are due to or caused by constipation; that the beneficial effect of the preparation will prevent or make improbable such diseases and conditions as appendicitis, tuberculosis, catarrh, typhoid and other contagious and acute diseases; or that any price is the regular price for the product, unless it is the price at which the product is regularly and customarily sold.

Ramstead Claims Will Cease

Ramstead Company, Inc., Milwaukee, agrees to cease representing that a medicinal preparation now designated "Ramstead Treatment" is a competent remedy or effective treatment for stomach ailments generally, or has any therapeutic value in treating such ailments in excess of affording temporary symptomatic relief in cases of gastric hyperacidity.

Other representations to be discontinued are that the preparation enables one to eat all kinds and types of foods; will overcome or eliminate constipation; eliminates hunger pains or the pains of gastric ulcers; will cause a recovery to health, and is a substitute for surgical treatment of gastric ulcers.

The respondent's stipulation is supplemental to one approved February, 1932, which is still in effect.

Westmore to Modify Claims

House of Westmore, Inc., and Perc H. Westmore, Burbank, Calif., agree to cease representing that cosmetics contain undesirable or unflattering colors, or colors which give a harsh or aged appearance; that any color has been filtered out of or removed from House of Westmore cosmetics; and that the selectivity of cosmetics in the reflection or transmission of color is a discovery or a secret.

Danzola Hair Preparation

Hinton Pharmaceutical Company, London, Ky., agrees to cease representations of "Danzola," a hair preparation.

Among the representations to be discontinued are that experts have learned the secrets of dandruff, or that the product "Danzola" is the result of such alleged knowledge, or that because thereof dandruff is "now unnecessary"; that "Danzola" or any similar product is a competent treatment or effective remedy for dandruff, or that its use may be relied upon to accomplish more than a temporary removal of loose dandruff scales or a physical hiding thereof; that "Danzola" is a "fine tonic" for dandruff or for "other scalp ailments," or instantly relieves itching scalp, or has any remedial or tonic effect in scalp conditions, and that the results from the use of "Danzola" are guaranteed.

Nasal Filter

The F. Koehler Manufacturing Company, Inc., Newport, Ky., agrees to cease representing that "F. K. Invisible Nasal Filter" will relieve the misery or discomforts of hay fever, rose fever, sinus infections or asthma, or has any therapeutic value in their treatment in excess of a partial protection of the nasal membrane from the irritating substances. Among other representations which the respondent agrees to discontinue are: that the device will protect the nasal passages from dust or pollen, and afford effective relief for headaches caused by gasoline fumes or for coughing or phlegm-filled throat condition caused by asthma or sinus infections.

F.T.C. Orders

Home Diathermy Claims

Home Diathermy Company, Inc., is ordered to cease advertisements which represent that respondent's "Home Diathermy" device may be easily and safely used in the home; that its use constitutes a cure or remedy for arthritis, neuritis, bursitis, sciatiac, neuralgia, lumbago, hay fever, asthma, high or low blood pressure, or rheumatism; or that the device has any therapeutic value in treating such diseases and conditions or in treating any other ailment, unless the advertisement is specifically limited to those cases where acute inflammation, infection, pus formations, arteriosclerosis or conditions in which there is a tendency to hemorrhage, are not present.

The order also prohibits the dissemination of advertisements which fail to reveal that the unsupervised use of the respondent's device by persons not skilled in the diagnosis, analysis and methods of treatment of disease, may result in serious and irreparable injury to health.

Order Amended

The F. T. C. has issued an order striking out a portion of its order to cease and desist of April 15, 1940, entered against Rose Heifler and Fred Jackson, trading as Heifler and Jackson, Brooklyn, distributors of "Morgan's Pomade."

The Commission order of last April directed the respondents to cease dissemination of advertisements containing certain representations of their product.

Upon request of respondents, the Commission, in the public interest, has modified its order to cease and desist by striking from the last four lines the language "or which advertisements fail to reveal that the application of 'Morgan's Pomade' to tender, injured or broken skin may result in serious injury to the health of the user."

F.T.C. Answers

Texas Wonder Answer

E. B. Hall, trading as E. W. Hall, St. Louis, has filed an answer to the complaint which charged misrepresentation of "Texas Wonder." The complaint alleged that respondent falsely represented that his product constitutes a cure or remedy for and possesses substantial therapeutic value in the treatment of kidney and bladder disorders, diabetes, rheumatism, swollen joints, weak and lame back, back pains, and lumbago. The respondent contends that his product is a diuretic, analgesic and laxative, and that he is, therefore, entitled to make such claims as are proper for a preparation of this character.

American Bandage Answers

The American Bandage Corp., Chicago, has filed an answer to the complaint recently issued. The complaint charges respondent with disseminating false and misleading representations relative to its medicated bandage sold and distributed under the trade name "ABC Gauzband," to the effect that the product is self-sterilizing and will remain sterile even after it is removed from the package.

Respondent admits disseminating advertisements in the past as above set out, but alleges that it has voluntarily discontinued such representations.

Respondent asserts that the medication in its bandages renders them antiseptic and germicidal so that said bandages are capable of inhibiting the growth of, and of destroying, the common non-spore-forming bacteria, and that said bandages are appreciably self-sterilizing with respect to the common non-spore-forming bacteria; and that said medication will maintain the rolls of said bandages in a sterile condition with respect to the common non-spore-forming bacteria for a reasonable length of time after said rolls have been removed from the package.

LUSTEROID

means

Custom-made

EVERY Lusteroid package is a custom-made package—especially designed to do a specific task. It is designed to fit the product, to allow of easy filling and to give the maximum display either to the contents or the label. The many features of rigid cellulose Lusteroid vials and tubes—extremely light weight, unbreakability, unlimited color possibilities, transparency or opacity, integral labeling—are combined in the manner best calculated to do a sound merchandising job for the product contained.

There are many economies in using Lusteroid sample or sale packages—in low packing and shipping costs, in lack of breakage.

A note or phone call will bring an answer to your packaging problem.

LUSTEROID CONTAINER CO., INC.

Formerly Lusteroid Division of The Sillcocks-Miller Company

12 Parker Avenue, West

SOUTH ORANGE, NEW JERSEY

Use LABELS AND SEALS

FAITHFUL by SERVICE

JOHN HORN

837-839 TENTH AVENUE

NEW YORK N.Y.

FOR OVER FIFTY YEARS

for greater sales appeal

METAL · EMBOSSED

ENGRAVED

DIE STAMPING FOR BOXMAKERS

SET-UP PAPER BOXES, FIBRE CANS

TRANSPARENT PACKAGES

Write for samples and complete information

W. C. *Ritchie* AND COMPANY

8847 BALTIMORE AVENUE, CHICAGO

SALES OFFICES IN PRINCIPAL CITIES

SHEET METAL GOODS

SPRINKLER TOPS

CORK TOPS DOSE CAPS

CONSOLIDATED

FRUIT JAR COMPANY

NEW BRUNSWICK, N. J.

Drugs in Britain

(*Continued from page 653*)

Drug	Class	Substitute or equivalent and remarks
Hydrarg.Iodid.Rub	B	
Hydrargyrum	B	
Hyoscyamus muticus	A	For manufacture of atropine
Inj. Ferri	C	Substitutes: Ferri Sulphas or Ferri et Ammon. Cit. by mouth
Iodoform	B	Substitutes: Proflavine or acriflavine
Iodum	C	Production at home and within the Empire should be encouraged. Substitutes: Proflavine, acriflavine, trinitrophenol, crystal violet, brilliant green
Ipecacuanha	B	Preference should be given to manufacture of emetine. Galenical preparations of ipecacuanha as expectorants and emetics are not essential. Production within the Empire should be encouraged
Jalap and its resin	C	Countries of origin: Mexico, India. Substitute: colocynth
Jaborandi	B	Reserve for manufacture of pilocarpine. Production within the Empire should be encouraged
Krameria	C	Country of origin: Peru. Production within the Empire should be encouraged. Substitute: Tannic acid
Linum	C	Substitute: Cataplasma Kaolin for poultices
Lobelia	C	Country of origin: Eastern U.S.A. Production within the Empire should be encouraged. Substitutes: stramonium, nikethamide, leptazol
Luminal and Luminal Sodium	C	Phenobarbitone and soluble phenobarbitone is identical
Magnes. Carb.	B	Substitute appropriate sodium salts where possible
Magnes. Oxid	B	
Magnes. Sulph	B	
Medinal	—	Soluble barbitone is identical
Mel	B	Under Government control
Menthol	A	Production within the Empire should be encouraged
Nembutal	—	Pentobarbital sodium is identical
Ol. Abietis	C	Countries of origin: North-east U.S.S.R. Importation unnecessary. Substitute: any oil of pine
Ol. Amygdalae	C	Production within the Empire should be encouraged
Ol. Anethi	A	Production in England should be encouraged
Ol. Anisi	A	Production within the Empire should be encouraged
Ol. Cadin	A	Production within the Empire should be encouraged
Ol. Camphor. Essent	C	Substitute: Ol. Terebinth. See Camphor
Ol. Cardamon	C	Unnecessary
Ol. Carui	C	See Carum
Ol. Chenopod	B	Not essential for Great Britain. Substitutes: Thymol, carbon tetrachloride. Production within the Empire should be encouraged
Ol. Cinnamon	A	See Cinnamon
Ol. Croton	C	Unnecessary
Ol. Gaultheria	C	Substitute: Methyl salicylate
Ol. Limonis	—	Production within the Empire should be encouraged
Ol. Menth. Pip.	A	Production within the Empire should be encouraged
Ol. Morrhuae	B	Under Government control. Substitute Oleum Vitaminatum to relieve scarcity
Ol. Olivae	B	Under Government control. Substitutes: Arachis and other suitable vegetable oils are recognized as substitutes in official preparations
Ol. Santali	C	Country of origin: India. Importation unnecessary. Substitutes: Sulphanilamide, hexamine, mandelic acid, sod. benzoate, scoparium
Ol. Terebinth	A	Production within the Empire should be encouraged
Paraff. Liq	B	Under Government control. The use should be discouraged
Paraff. Molle	B	Under Government control
Pelletierine Tannate	C	Countries of origin: Mediterranean countries. Importation unnecessary. Substitutes: Filix Mas- Carbon tetrachloride
Perabrodil	C	Diodone is identical
Phemitone	A	The chemical equivalent of Prominal
Phenobarbitone & Sol. Phenobarbitone	A	The chemical equivalents of Luminal and Luminal Sodium
Pilocarpine	B	Substitute Physostigmine for most purposes
PodophyllumResin	B	Restrict to Indian podophyllum
Potass. Bicarb., Bromid.,Chloras. Citras., Hydroxid., Iodid., Permang.	B	Substitute sodium salts where possible
Potass. Tart. Acid	C	See Tartaric Acid
Prominal	—	Phemitone is identical
Psyllium	C	Countries of origin: Mediterranean countries. Production within the Empire should be encouraged. Substitute: Isphagula
Quillaia	C	Countries of origin: Chile, Peru, India. Importation unnecessary. Substitutes: various emulsifying agents
Rheum	A	Production of *Rheum palmatum* in the Empire should be encouraged
Salicin	C	Substitute sodium salicylate
Salol	C	Unnecessary
Santonin	B	Country of origin: U.S.S.R. Importation difficult. Substitutes: Hexylresorcinol, Phenothiazine
Scammony	C	Unnecessary. Substitute Indian podophyllum
Scilla	C	Country of origin: Sicily. Production within the Empire should be encouraged. Substitutes: Urginea Indica and other expectorants
Senega	C	Countries of origin: Canada and U.S.A. Importation unnecessary. Substitutes: Iodides, Ammon. Carb., Ammon. Bicarb., Ammon. Chlor.
Sod. Citras	B	See Citric Acid
Sod. Potass. Tart.	B	See Tartaric Acid
Sod. Tauroglycochol.	C	Substitute: Extract Fel. Bovin
Sparteine	C	
Spirit Aether Nit	B	Substitute: Concentrated solution of ethyl nitrite
Strophanthus kombe	C	Countries of origin: Mozambique, Nyasaland. Importation unnecessary. Substitute digitalis
Styrax	B	Country of origin: Asiatic Turkey. Production within the Empire should be encouraged. Wanted for Tinct. Benz. Co.
Syrups	B	The use of all syrups should be discouraged
Syr. Ferri. Phosph.	B	Reserve for children
Syr. Ferri. Phosph. c. Quin. et Strych.	C	Substitute tablets of Easton's syrup
Tamarind	C	Countries of origin: India, Burma, W. Indies. Importation unnecessary
Taraxacum	C	Unnecessary
Tragacanth	A	Production within the Empire should be encouraged. Methyl cellulose and similar synthetics will be tried as substitutes
Uroselectan B	C	Iodoxylum is identical
Valerian	—	Production in England should be encouraged
Veronal	—	Barbitone is identical
Ventriculus Desiccat.	B	Injection of liver should be used wherever possible
Zingiber	A	If the official variety is scarce supplies from other sources, e.g. Africa, should be permitted

Brittleness of Nails

(*Continued from page 651*)

that nearly fifty per cent. showed brittleness and splitting of the nails in some degree while the other half of the group were able to wear lacquer polishes without any sign of irritation.

Hollander declared that nail lacquers and manicuring aids produced scaling of the nail plates and occasionally inflammation of the nail bed. On the otherhand, Downing expressed the belief that antiseptic qualities of liquid nail polishes may be of value in the prevention of infections resulting from the none too sterile implements used by manicurists.

In so far as the defatting action on the nail substance itself is concerned, the low fat content of the nail would seem to indicate that this is of little importance. The observations among workers with solvents, seem to substantiate this view.

In addition, the quantity of solvent present in an application of nail lacquer is small. In so far as solvent removers of lacquers are concerned, although larger quantities are used the time of exposure to these solvents is short. It is, therefore, apparent that the factor of fat solvent action of lacquers and removers has been too strongly emphasized. There is, however, one factor, other than fat solvent effect which we consider of greater importance with regard to the action of esters on the nail. That factor is the dehydrative action of these materials. Since keratin hydrates readily, it is conceivable that such a state, if followed by dehydration will cause interlamellar loosening or detachment with subsequent manifestations of brittleness.

Summary and Conclusions

The causes of brittleness are many and no single factor may be said to be responsible.

The survey indicates that in various diseases symptoms of brittleness are quite common. In these cases it would be necessary to treat the disease to normalize the nails. An important point which has evolved from this study is that slight systemic disorders or mild infections seem to lower the threshold of normal nail production to a point at which external contactants become secondary contributors to the causation of brittleness.

The survey on the relationship of brittleness to occupation and contactants indicates that brittleness is common among housewives. Since the highest incidence of brittleness is found among housewives not using lacquers the natural inference is that substances such as soap, water and the normal chemical coterie of the kitchen are important contributors.

The rôle of iron metabolism is stressed as of importance in brittleness among women. This is shown by the fact that brittleness, and even more pronounced nail changes such as koilonychia are cleared by proper iron medication.

The study on pH indicates that if the skin is alkalinized, contactants which are ordinarily innocuous to normal skin may become sensitizers and thus contribute to the causation of brittleness.

The relationship between unsaturated fats, avitaminosis and brittleness is discussed.

Attention is called to the possible dehydrative action of solvents on the nail rather than their defatting action because of the low fat content and the comparatively high water content of the nails.

The evaluation of the possible factors in the causation of brittleness points to two distinct groups.

1. Causes of internal origin such as disease, systemic dysfunction and dietary imbalance.

2. Causes of external origin, such as trauma, chemicals and common contactants.

In addition, it should be stressed that there is a balance between these two factors which determines the extent of brittleness.

Packaging in Plastic

(*Continued from page 637*)

without this article necessarily going into their discussion.

No doubt many manufacturers have adopted the plastic container without ever experiencing the slightest trouble, nor did they observe the formality of conducting preliminary tests. But they were lucky. Too much emphasis cannot be placed on the necessity for these preliminary tests, and it must be constantly remembered that it is not sufficient to determine the compatibility existing between the preparation and plastic material alone, but that the entire and completed package must be included as a whole.

Oil of Petitgrain

(*Continued from page 643*)

When the leaf material is harvested from *wild-growing* trees, the branches are hacked off even more crudely and the trees trimmed without any regard for their life. This goes so far that sometimes the entire tree is felled in order to facilitate cutting of the branches and leaves. In general, there has been such crude exploitation of the wild-growing trees that today the migratory distillers have to go farther inland and deeper into the forests in search of sufficient distillation material, and this naturally increases the cost of production. However, there is still sufficeint unexploited material left in those vast forests to permit increased production should there be a demand for it.

Another bad practice is the cutting of leaf material, either from planted or wild-growing trees, in the cold season. During that period, temperatures of -2° to -3° C. are not unusual, and even -5° C. has been observed on rare occasions. Such frosts kill the tender, young shoots developing on freshly cut branches.

(*To be concluded in January*)

U.S.I. ALCOHOL NEWS

December ★ A Monthly Review of Technical Developments for Chemists and Executives ★ 1940

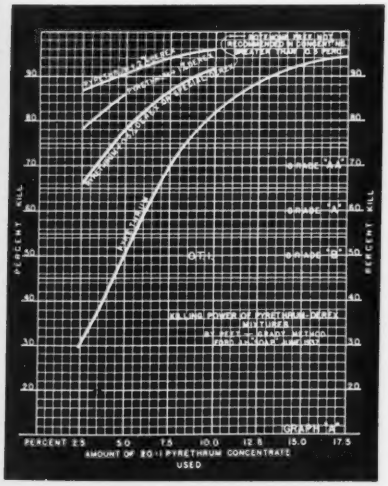
LOWER SPRAY COSTS PER UNIT KILL

Solvent for Derris Extractives Increases Insecticidal Powers

Low cost, high kill power in insecticides are easily obtained by the use of Dimethyl Carbobutoxy Dihydropyrone, the solvent for derris extractives specially developed by U.S.I. "Dihydropyrone" has the special advantage of being insecticidally active.

"Dihydropyrone" is available to manufacturers who prefer to use their own derris extractives. For manufacturers who desire a ready-to-use concentrate, U.S.I. offers DEREX, a solution of derris extractives, with or without rotenone, in "Dihydropyrone."

DEREX offers exceptional opportunities to obtain high kill economically. Derris extractives give lowest cost per unit kill, and their



Graph shows increase in kill power when small amounts of DEREX are added to pyrethrum.

effectiveness is increased by solution in "Dihydropyrone." When 0.5% DEREX is added to a paralytic agent having a knockdown equal to that of 3% pyrethrum, 20 pound concentrate, the resulting spray has AA Grade kill, and possesses the added sales advantage of being *practically odorless.*

"Dihydropyrone" dissolves 7.5% rotenone at 20° C., dissolves 25-30% derris resinate at the same temperature. It will hold derris extractives in solution in the commonly used base oils. Its excellent repellent properties are especially suitable for cattle sprays and mosquito lotions. In combination with U.S.I.'s BK-5, it can be used for formulating lotions combining sun-screening and mosquito-repelling properties.

U.S.I. will gladly give further information on "Dihydropyrone" and DEREX.

Insecticidal sprays with high kill power and practically no odor can be formulated at low cost with U.S.I.'s solvent, "Dihydropyrone," which possesses insecticidal properties of its own.

TECHNICAL DEVELOPMENTS

For further information write U.S.I.

A soap anti-oxidant is said to be effective in proportions of 1.1%, and to require less perfume in the soap because it results in less soapy odor. **(No. 400a)**

Perfumery mixtures recently patented contain ingredients prepared by reacting acetone or other ketones with alkyl pyrocatechols. It is said that compounds can be prepared with odors simulating amber, opoponax, labdanum. **(No. 401a)**

A drug mill of stainless steel is said to resist corrosion by materials commonly used in pharmaceutical preparations and to reduce danger of contamination. **(No. 402a)**

A bottle cleaner is described as intended for removing lint, dust, and dirt from new glassware after unpacking it from shipping cartons. Maker says it is automatic, handles a wide variety of types. **(No. 403a)**

Straining mucilage or thick emulsions is simplified by the use of a turbine sifter, it is claimed. It is said that the sifter can be used in continuous operation. **(No. 404a)**

Recommended colors for eye cosmetics are summarized in a recently issued bulletin. **(No. 405a)**

A "promulsor" is said to combine principles of homogenizer and colloid mill, and to be adaptable to requirements of food, drug, and cosmetic industries. **(No. 406a)**

New artificial civet is described as twice as strong as Abyssian civet, equal in strength to civet absolute. **(No. 407a)**

A magnolia character can be imparted to extracts, powders, and creams by a new product, it is claimed. **(No. 408a)**

ALCOHOL GIVES COOL EFFECT IN CLEANSING PAD LOTIONS

Popular cleansing pads get extra sales value from the use of lotions containing alcohol, which imparts a cooling effect, it is reported. Relative newcomers in the cosmetic field, these lotions have quickly established themselves, offer interesting sales possibilities.

U.S.I. INDUSTRIAL CHEMICALS, INC.

60 EAST 42ND ST., NEW YORK (USI) BRANCHES IN ALL PRINCIPAL CITIES

INDUSTRIAL ALCOHOL IN ALL GRADES AND ALL FORMULAS

TESTS OF MANY TYPES GUARD PURITY OF U.S.I. ALCOHOL

No. 6 OF A SERIES ON THE CONTROL AND TESTING OF U.S.I. ALCOHOL

IN CONTROLLING the purity and quality of U.S.I. Alcohol, every type of test is employed that is of value in assuring the maintenance of U.S.I. standards. Many of these tests are commonly known and widely used. Others were developed by U.S.I. as a result of its long experience in alcohol manufacture, and give *extra* assurance of the qualities you want when you buy alcohol.

Chemical tests of extreme delicacy have been devised to detect the presence of the slightest traces of impurities. And the results of these tests are rechecked by supplementary procedures that range from spectroscopic analysis to odor tests by skilled "sniffers"!

This constant care in the testing of U.S.I. Alcohol means important sales advantages for *you*—for it helps you to formulate products that will please your most discriminating customers and bring repeat sales for your perfumes and cosmetics.

U. S. INDUSTRIAL CHEMICALS, INC.

▲ **Exceeding generally accepted standards for purity, U.S.I. Pure Ethyl Alcohol is the choice of leading hospitals, scientific institutions, food manufacturers. U.S.I. Specially Denatured Alcohol is manufactured under the same rigid standards.**

▶ **Odor tests at U.S.I. have been developed to a high degree of efficacy. They serve to supplement and check the data determined by chemical analyses, provide an additional safeguard for the quality of U.S.I. Alcohol.**

NEWS

Associations

Toohy Heads D.C.A.T.

John J. Toohy, E. R. Squibb & Sons, was elected chairman of the Drug, Chemical and Allied Trades Section of the New York Board of Trade at the first meeting of its newly elected executive committee, held November 26 at the Drug and Chemical Club, New York. Rudolph F. Berls, McKesson & Robbins, Inc., was elected vice-chairman and Robert B. Magnus, Magnus, Mabee & Reynard, Ind., was re-elected treasurer.

JOHN J. TOOHY

RUDOLPH F. BERLS

DR. PERRIN H. LONG

Carl M. Anderson, Merck & Co., has been named counsel, and F. J. McDonough, N. Y. Quinine & Chemical Works, will represent the Section on the board of directors of the parent board.

The following executive committee was elected at the 50th annual meeting of the Section which was held November 19 at the Hotel McAlpin: Harold M. Altshul, Ketchum & Co.; C. C. Caruso, Schieffelin & Co.; James J. Clark, Liggett Drug Co., Inc.; Turner F. Currens; James DeCesare, White Laboratories, Inc.; A. E. Johnston, Colgate-Palmolive-Peet Co.; J. H. Karrh, Victor Chemical Works; Elvin H. Killheffer, E. I. duPont de Nemours & Co., Inc.; Paige D. L'Hommedieu, Johnson & Johnson; S. B. Penick, Jr., S. B. Penick & Co.; H. B. Prior, Prior Chemical Corp.; Robert J. Quinn, Mathieson Alkali Works, Inc.; J. P. Remensnyder, Heyden Chemical Corp.; Carroll Dunham Smith, Carroll Dunham Smith Pharmacal Co.; E. T. T. Williams, Becton, Dickinson & Co.; and Victor E. Williams, Monsanto Chemical Company.

The Honorable Basil D. Dahl, American Consul for Batavia, Java, Dutch East Indies, was the guest speaker at the Section's 50th annual meeting. Mr. Dahl pointed out the importance of the Netherlands East Indies as a market for American goods and also their importance as a source of valuable raw materials in the chemical field which are available nowhere else.

Major Kuhn Addresses Salesmen

The Salesmen's Association of the American Chemical Industry held a luncheon meeting at the Chemists' Club, New York, December 10. Major H. A. Kuhn of the Chemical Warfare Service was the guest speaker.

At this meeting the results of the annual election of officers were announced. Walter D. Merrill, head of Joseph Turner & Co., Ridgefield, N. J., and formerly vice-president, succeeds DeWitt Thompson, Mathieson Alkali Works, as president. Other officers elected were: vice-president, Carl O. Lind, Dow Chemical Co.; treasurer, Gerald S. Furman, Merck & Co., Inc.; secretary, John J. Butler, Jr., Industrial Chemical Sales Division of the West Virginia Pulp and Paper Co. Charles W. Frost, Prior Chemical Corp., and George T. Short, Wishnick-Tumpeer, Inc., were elected to the executive committee for a three-year term.

A.P.M.A. Winter Meeting

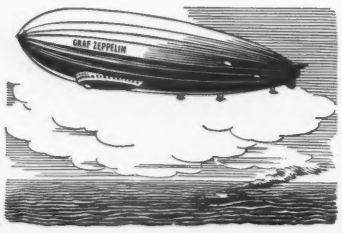
The American Pharmaceutical Manufacturers' Association held its midyear meeting in Washington, December 9 and 10. During the meeting Dr. Perrin H. Long, of Johns Hopkins University was presented with the association's scientific award for 1940.

The morning session on the 9th was devoted to the reports of the research committee whose chairman is Dr. C. W. Sondern and of the contact committee, headed by Dr. Frank B. Fiske, Pitman-Moore Co.

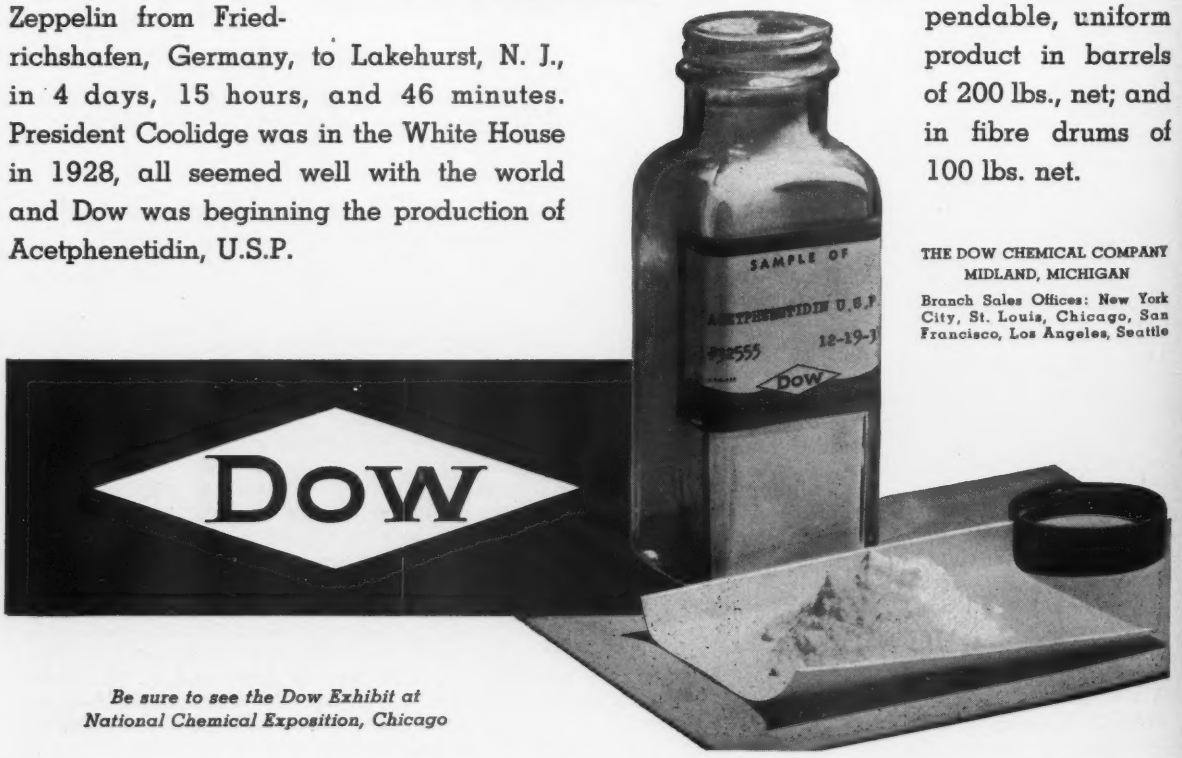
At 2 o'clock on the 9th the exercises in connection with the presentation of the award to Dr. Long were held. The general topic was, "The Fundamental Significance of Pharmaceutical Research." Dr. H. Sheridan Baketel, president of Reed &

12 Years of ACETPHENETIDIN U.S.P. Production

TWELVE YEARS is a long time in this fast-moving world. A dozen years ago the world was agog over the new "talkies" and "The Jazz Singer" received a special award as the first movie to be heard as well as seen. America was thrilled by the flight of the Graf Zeppelin from Friedrichshafen, Germany, to Lakehurst, N. J., in 4 days, 15 hours, and 46 minutes. President Coolidge was in the White House in 1928, all seemed well with the world and Dow was beginning the production of Acetphenetidin, U.S.P.



These twelve years of production have established Dow as a leading producer of Acetphenetidin for use in medicine as an antipyretic, analgesic, and sedative. Twice ground through pulverizing mills at 200 mesh fineness, this crystalline powder is characterized by exceptional whiteness, while its purity is indicated by a melting point of 134½ to 135½° C. Dow ships this dependable, uniform product in barrels of 200 lbs., net; and in fibre drums of 100 lbs. net.



THE DOW CHEMICAL COMPANY
MIDLAND, MICHIGAN

Branch Sales Offices: New York City, St. Louis, Chicago, San Francisco, Los Angeles, Seattle

DOW

Be sure to see the Dow Exhibit at National Chemical Exposition, Chicago

Carnrick, presided. The first speaker was James Somerville McLester, M.D., for many years professor of medicine in the University of Alabama, and former president of the American Medical Association. Another speaker was George Raymond Cowgill, Ph.D., physiologist, biochemist, and nutritionist and associate professor of physiological chemistry at Yale University School of Medicine. Dr. Cowgill is nutrition advisor to Gorgas Memorial Laboratory of Tropical and Preventive Medicine in Panama and to the governments of Cuba, Costa Rica and British Honduras. He is editor of the "Journal of Nutrition" and a member of the vitamin advisory committee of the U. S. Pharmacopoeia.

The presentation of the award to Dr. Perrin H. Long was made by Charles E. Vanderkleed, D. Sc., vice-president and scientific director of McNeil Laboratories, Philadelphia. The award of distinction was presented to Dr. Long in recognition of his fundamental and outstanding contributions to the study of the use of sulfanilamide, sulfapyridine and related pharmaceuticals in the treatment of disease.

Dr. Long received his bachelor's and medical degrees from the University of Michigan in 1924. After the usual preliminary training he became an assistant at the Hygienic Institute of Freiburg, Germany, and from 1927 to 1929 was an associate at the Rockefeller Institute for Medical Research in New York. Since 1929 he has been connected with the Medical School at Johns Hopkins University and is now professor of experimental medicine. Widely known for his research in virus diseases, bacterial diseases and the chemo therapy of bacterial infections, Dr. Long has made a world wide reputation in connection with the study of sulfanilamide, sulfapyridine, and related pharmaceuticals.

Following the presentation of the scientific award, the meeting was addressed by Dr. J. J. Durrett, of the Food and Drug Administration. He discussed recent administrative changes with respect to section 505 of the Federal Food, Drug and Cosmetic Act, and the proposed revision of the "caution" regulations under section 502(f) (1) of the Act. Following his address Dr. Durrett answered questions from the floor.

Tuesday morning, December 10 was devoted to a National Preparedness Program. This session was presided over by Lieut. Colonel C. F. Shook, Medical Corps, chairman of the Medical Supplies Committee, Commodities Division of the Army and Navy Munitions Board.

Addresses were also given by Commander C. L. Andrus, Navy Chairman, Medical Supplies Committee, Army and Navy Munitions Board; Major C. V. Morgan, Medical Corps, director of the Commodities Division of the Army and Navy Munitions Board; Carle M. Bigelow, director of the Pharmaceutical Division, Calco Chemical Division, American Cyanamid Co., in charge of the purchasing of pharmaceuticals and allied products for the British Purchasing Commission; J. C. Nichols, director of miscellaneous equipment section, Production Division, Advisory Commission to the Council of National Defense; Carson Frailey, executive vice-president, American Drug Manufacturers' Association, chairman of Drug Resources Committee, Army and Navy Munitions Board; Inspector Lee R. Pennington, of the Federal Bureau of Investigation; and Leon Henderson, commissioner in charge of the Price Stabilization Division, Advisory Commission to the Council of National Defense, member of the Securities and Exchange Commission, and formerly executive secretary of the Temporary National Economic Committee.

Tuesday afternoon was devoted to the report of Charles Wesley Dunn, general counsel for the organization and an executive session.

Remington Medal Dinner

The Remington Honor Medal for 1940 was awarded to Dr. Robert L. Swain, editor of *Drug Topics*, at a dinner at the Hotel Pennsylvania, New York, November 28. Before he joined the staff of "Drug Topics" last year, Dr. Swain served as Deputy Food and Drug Commissioner of the State of Maryland for seventeen years. Before 1922 he operated a retail pharmacy in Sykesville, Md. He has served as president of the American and Maryland Pharmaceutical Associations, as president of the National Association Boards of Pharmacy, as chairman of the National Conference of Pharmaceutical Law Enforcement Officials and is at present a member of the Maryland Board of Pharmacy, of the Board of Trustees of the U. S. Pharmacopoeia, and of the American Council on Pharmaceutical Education.

Rudolph O. Hauck, president of the New York branch of the American Pharmaceutical Association, acted as toastmaster at the dinner and Dr. J. Leon Lascoff presented the medal.

Among the speakers were Dr. E. F. Kelly, secretary of the American Pharmaceutical Association, who spoke of Dr. Swain as an association member and public health administrator, and Dr. H. C. Christensen, former medalist and secretary of the association, who dealt with Dr. Swain's influence in the National Association of Boards of Pharmacy.

Dr. Robert P. Fischelis, secretary of the New Jersey Board of Pharmacy described his work in the field of pharmaceutical legislation, and R. D. Keim, E. R. Squibb

REMINGTON MEDAL DINNER TO DR. SWAIN

This

THANK-YOU

expresses our sincere appreciation

for that consistent, loyal patronage which has helped so materially to build Kolmar Laboratories.

We again pledge our every effort to maintain those dependable high standards in products and business practices which have brought Kolmar to the front ranks in the manufacturing of cosmetics.

These Kolmar representatives join us in wishing you pleasant holidays and a most successful New Year.

M. C. Boyd.....Quinby Building.....Newark, N. J.
Douglas Haggerty.....122 E. 42nd St.....New York City
Warren Curry.....3980 Club Drive.....Atlanta, Ga.
Norman Kole.....980 Merchandise Mart.....Chicago, Ill.
R. F. G. Byington.....155 N. Vermont Ave.....Los Angeles, Cal.

Kolmar laboratories

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Manufacturers of cosmetics for private label brands only. We never compete with our clients. We also protect the interests of our clients with Products Liability Insurance.

& Sons, spoke on his influence on pharmaceutical journalism. Dr. Walter A. Bastedo, president of the 1940 U. S. Pharmacopoeial Convention, spoke of Dr. Swain as a member of the board of trustees of the U. S. P., and Dr. Evert Kendig, Temple University, outlined his contribution to pharmaceutical education.

Senator Millard E. Tydings of Maryland spoke of the part the medalist has played in the fair trade movement.

Bedell Heads Mich. Assn.

A. S. Bedell, treasurer and assistant secretary of Beauty Counselors, Inc., Detroit, has been elected president of the Allied Drug and Cosmetic Association of Michigan for the year 1941. Mr. Bedell, a graduate of the School of Commerce and

A. S. BEDELL

Finance of the University of Detroit, has been associated with Beauty Counselors since 1932.

Other officers of the association elected were: vice-president, R. P. Cole, Eaton Clark & Co.; secretary, M. C. deNavarre; treasurer, R. L. Clarke, Hazel Atlas Glass Co.; G. Buck, Standard Oil, and O. Wegner, Nelson Baker Co., Inc., were elected to the executive committee.

Walter Daniel, Parke, Davis & Co., the retiring president, will also serve on the executive committee during the next year.

Senator Tydings Addresses D.C.A.T.

At a special luncheon meeting of the Drug, Chemical and Allied Trades Section of the New York Board of Trade held at the Hotel Pennsylvania, New York, November 28, the speaker was Senator Millard E. Tydings of Maryland. Senator Tydings' subject was: "Government Finance and the National Defense Program."

Foragers Annual Banquet

The Foragers of America, the oldest organization of toilet goods salesmen in the United States, will hold its 43rd annual banquet Saturday, January 11, at the Midston House, 38th Street and Madison Avenue, New York. H. T. Georgi, president, and Theodore Hanlon, vice-president, and the entertainment committee, have made arrangements for a grand get-together. A cock-tail party as usual will start in the club rooms at 6.30 p. m. R. J. Crawford, who has been with the American Hard Rubber Co. for fifty years, has been chosen as the guest of honor.

A.Ph.A. Elects Christensen

The result of the balloting by mail for the officers of the American Pharmaceutical Association, has been announced. The new officers will be: president, R. V. Christensen; first vice-president, J. K. Attwood; second vice-president, L. W. Rowe; members of the council, R. L. Swain, P. H. Costello, F. E. Bibbins.

These officers will be installed at the next annual meeting of the association which will be held in Detroit, August 17 to 23, 1941.

Essential Oil Dealers Annual Meeting

The Essential Oil Association of the United States will hold its annual meeting and election of officers January 9 at the Hotel Warwick, New York. Charles Fischbeck, vice-president of P. R. Dreyer, Inc., is president of the association.

Quinine Control Statement

In answer to persistent rumors of Nazi attempts to interfere with the Dutch quinine industry since the invasion of Holland last May, Norman Taylor, director of Cinchona Products Institute, Inc., has issued the following statement:

"Heretofore Amsterdam has been the headquarters of an industry which has assured the supply of this world-wide remedy for malaria. By Royal Decree the management of this quinine industry was transferred to Bandoeng, Java, on May 14, 1940.

"We have been warned, although the warning was scarcely necessary, to have no communication with our former associates in Amsterdam for fear such correspondence might be diverted to Nazi ends.

"Java is now the center of the world's quinine industry, where ample production is assured of both cinchona bark and manufactured quinine. The latter is produced at the Bandoengsche Kininefabriek, the largest quinine factory in existence. There is thus no danger of a quinine shortage anywhere in the world. Of equal importance to Americans is the assurance that their need of this malaria remedy is absolutely removed from Nazi domination.

"The quinine industry, now centralized in the Netherlands East Indies, is completely Dutch and completely determined that Holland's plight shall not be turned to Nazi advantage. That attitude also actuates those connected either with the sale of Dutch quinine here or with the research and educational program of that industry."

Companies

Dow Chemical Conference

Leland I. Doan, vice-president and general sales manager of The Dow Chemical Co., presided at a four-day conference of one hundred Dow representatives from Canada, Mexico, and the United States at the company's offices at Midland, Mich., November 13 to 16.

A feature of the conference was a two-day session devoted to discussion and motion pictures of the company's progress. It featured plants which have recently been completed and new products which have been added to the Dow line.

Representatives and executives who took part in the discussion were: Dr. Willard H. Dow, president and general man-

LELAND I. DOAN

ager; Earl W. Bennett, vice-president, secretary and treasurer; R. L. Curtis, general manager, and J. F. Smith, sales manager of Dow's great western division, Pittsburgh, Calif.; Dr. D. T. Prendergast, iodine and insecticide division, Long Beach, Calif.; Dr. Jose Polak, Dowell Sociedad Anonima, Mexico City; N. R. Crawford, vice-president and general manager of Dowell Inc., Tulsa, Okla.; L. C. Stewart, technical research department, Midland; M. E. Putnam, president, Cliffs Dow Chemical Co., Marquette, Mich.

The four-day program was brought to an end on Saturday with a trip by special train to Ann Arbor for the Michigan-Northwestern football game.

Three New Bristol-Myers V. P's

At a meeting of the board of directors of Bristol-Myers Co., New York, held November 6 three new vice-presidents were elected: Robert B. Brown, Walter B. Johnson and William M. Springer.

Palol Appoints Ritchie & Janvier

Palol Perfumed Products, Inc., of New York, has appointed Ritchie & Janvier, Inc., also of New York, as national sales agent for the entire line of products made with the newly developed Palol. About 400 better class specialty outlets are selling Palol products.

STOCKING UP TIME

We Wish our Friends and Customers a Very Merry Christmas and a Prosperous 1941

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MEMPHIS, TENN.
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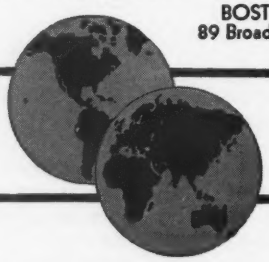
Water Soluble Gums	Waxes	Cosmetic Raw Material	Fruit Flavors
Thymol	Stearic Acid	Oleo Resins	Food Colors
Aromatics	Essential Oils	Perfume Bases	Quince Seed
Rice Starch	Zinc Oxide French	Olive Oil	Irish Moss



Merck Control Laboratory

George W. Merck, president of Merck & Co., has made public the completed plans for new analytical control laboratories to be built at Rahway, N. J. The control division which will occupy the new building is responsible for testing all raw materials, ingredients, products, and packages for the company which turns out some 3,000 separate items in 13,000,000 containers per year.

Most striking feature is that the chemists' laboratory tables are in the form of a cross. Each of the four angles is designed to provide a working area for one chemist whose writing desk will be within the individual angular area. Opposite ends of each cross will be assigned respectively to sinks and compartments for clean glassware and balance areas for weighing samples. A fume "hood" will rise from the intersection and will provide individual access points for each chemist. High precision analytical balances will be located within a few feet of each working area. According to the new bench design, each chemist will work in a semi-private bay with all necessary facilities within or adjacent to his station. Traditional inconvenience, time loss, and "extra steps" will be practically eliminated.

The main operating laboratory will be on the third and top floor where artificial lighting will be supplemented by skylight illumination of the saw-tooth type. Throughout the building, interior lighting will be achieved through the use of fluorescent tubes.

Many special laboratories have been provided for on the second floor of the building. They include those for analytical research, bacteriology, package inspection, micro-analysis, physical apparatus, spectrography and a photographic dark room, also laboratories equipped for the maintenance of constant temperature and humidity as required.

Areas have been allocated for dusty operations and for those likely to produce excessive fumes. Ovens and furnaces will be located in a separate and specially ventilated department. As an aid to comfort and safety, more than thirty fume and dust hoods will be equipped with individual exhaust fans. Filtered fresh air will be forced into the building and distributed through a system of ventilating ducts. This installation will permit of the air being changed every five minutes.

To technical specialties, perhaps the most interesting feature will be the range of precision, analytical and test facilities. For some years in their work with vitamins, Merck chemists have found it necessary to use and in some cases further develop the most advanced methods and equipment for determining exactly the physical nature, chemical formula, quality, strength and other standards with regard to a host of organic materials. Not only chemical methods, but physical and optical procedures are employed. In modern organic synthesis very small samples must be analyzed to determine molecular constitution. Purity and identity of drugs and products which pass through the control laboratory must, in many instances, be established by the same highly refined analytical procedure which is used in the most advanced organic research. This represents a tremendous evolution from the old time test laboratory. Developments in physical chemistry in which the Merck Research Laboratories have been taking particular interest now make it possible to include a wide range of specialized apparatus in the new quarters of the control division. Facilities for spectroscopy, for instance, have been greatly expanded; likewise the latest types of optical laboratory procedure.

Each worker in the laboratory will find his work facilitated by numerous "services." Service lines will be provided for hot and cold water, distilled water, steam, gas, air, vacuum, hydrogen sulphide, and electric current. With a view to possible expansion, spare outlets from all service lines, will be established at many points throughout the new building.

Like the rest of the Merck "campus," as the group is often called from its resemblance to a university, the new control laboratory building will be in the style of traditional American architecture with classical influence. Reenforced concrete construction will be employed and exterior walls will be of brick. Inside the building, floors will be of mastic tile, laid on concrete. Main floor area will be seventy-two by one hundred and forty feet.

MERCK CONTROL LABORATORY

Sharp & Dohme in Detroit

A new sales district with headquarters in Detroit has been established by Sharp & Dohme, Philadelphia. The new office is is in charge of R. K. Fiddes.

McK. & R. To Get Half Million

William J. Wardall, trustee of McKesson & Robbins, Inc., has gotten authority from the New York Federal Court to accept an offer of Price, Waterhouse & Co., former accountants of the drug concern, to return $522,402.29, representing fees and expenses paid them for examining the company's books and accounts during six years of the former Coster-Musica regime —1933 to 1938 inclusive.

Price, Waterhouse & Co. has made the offer subject to the execution by the trustee of an agreement not to assert any clains against the accounting firm for "any acts or omissions to act" occurring prior to the date of the agreement.

Vick Adds to New Product Staff

A. T. Preyer, executive vice-president in charge of Vick Chemical Co.'s new products development, has announced that the division has been enlarged by the addition of Dr. John M. Wilcox, Elden Loyd Dosch, and Dr. Robert Steele.

Dr. Wilcox will supervise the technical development of future new Vicks products. He was formerly chief of product development at E. R. Squibb & Sons, and was a consultant to the central office of the Council on Pharmacy and Chemistry of the American Medical Association.

As a product manager, Mr. Dosch will specialize in packaging and merchandising problems. He was recently with the Loyd Co. of America, an organization he founded five years ago to sell food and drug specialties to institutions, drug and department stores. Previous to 1935, he was sales manager of the J. R. Watkins Co., Winona, Minn.

Dr. Robert Steele, new assistant to Dr. John M. Wright, Vicks technical director, was until recently a research assistant in the department of biochemistry at the University of Chicago.

Sullivan—Amer. Can President

Maurice J. Sullivan, executive vice-president, has been appointed president of the American Can Co., succeeding the late Dr. Herbert A. Baker who died November 25. T. N. Anderson, formerly vice-president and comptroller has been made executive vice-president and comptroller and D. W. Figgis, formerly vice-president, has been made executive vice-president of the company.

M. J. SULLIVAN

Mr. Sullivan was born in Chicago in 1881 and went to the American Can Co. as salesman at the time of its organization in 1901 from Norton Brothers, Chicago, one of the companies which went to form the American Can Co. He continued in sales in Chicago until he was transferred to St. Paul as local sales manager. Subsequently, he became district sales manager in San Francisco and in 1923 vice-president in charge of the Pacific coast. He has also been a director of the company since that time as well as a director of the Crocker First National Bank of San Francisco.

Roger & Gallet Moves Plant

Roger & Gallet, Inc., has moved its general offices and the plant to very much enlarged quarters at 337 West 27th St., New York. The company has leased 60,000 square feet as against the 25,000 square feet formerly occupied. This move was necessitated by increased business. A showroom will be maintained at the former address, 500 Fifth Avenue, for the convenience of out of town buyers.

Murphey Appointed Sales Manager

Roy L. Murphey has been appointed sales manager of the T. J. Holmes Co. Inc., Chartley, Mass. His headquarters are at the New York office which is located at 122 East 42nd Street. Mr. Murphey was formerly sales manager of the Atomizer Division of the DeVilbiss Co., Toledo, for many years.

Mary Pickford, Inc.

Mary Pickford, Inc., a cosmetic company has been organized in Cincinnati. The president is William H. Albers, a grocery chain executive, and the vice-president is Mary Pickford.

Merck Honors Darius

In celebration of his fifty years in the employ of Merck & Co., Inc., Charles A. Darius was guest of honor at a meeting December 5 of the Merck Quarter Century Club, at Essex House, Newark, N. J. George W. Merck, president of the company and of the club, was master of ceremonies at the meeting at which ten new members were welcomed into the club.

A testimonial book and a gift of luggage were presented to Mr. Darius who entered the employ of the company's publishing department in 1890. He was later manager of the Customs House department in charge of imports and exports, and is now a member of the new products division, in charge of patents and trademarks.

The new members of the Quarter Century Club are: Ray Anderson, Ethel Person, Edward Thomas, George A. Linzer, Leona Pickarski, Newton D. Bechtold, R. P. Lukens, James Kelly, George Kerper and Frank S. Rowe.

Conti Products to Brooklyn

The offices of the Conti Products Corp. have been moved from 155 Varick St., New York, to 45 Clinton Ave., Brooklyn. The executive offices and manufacturing division are now combined in one building. Conti Products Corp. was organized by Charles L. Huisking, president, in 1928. Before that time Charles L. Huisking & Co. had been one of the American distributors for Conti castile soap which was imported from Italy.

Norda Mexican Representative Visits

Max Schmidt, representative for Norda Essential Oil & Chemical Co. in Mexico recently visited the home office of Norda in New York for about ten days. Mr.

MAX SCHMIDT AND GEORGE MANN IN NORDA LABORATORY

Schmidt, who is shown in the picture with George Mann, also of Norda, conferred with Norda executives regarding the problems of the Mexican market and also to learn of the facilities that can be placed at his disposal for Mexican customers of the company.

Abbe Names Rogers

C. A. Beach, preisdent of Beach-Russ Co., has announced the appointment of B. W. Rogers as exclusive representative for the Abbe Engineering Co. and Beach-Russ Co. in the northern half of Ohio. Mr. Rogers maintains an office in Akron and P. M. Kline has one in Cleveland.

Payne Joins Sherwood

A. F. H. Payne, who has been associated with the Gulf Oil Corp., Pittsburgh, for many years, joined the Sherwood Petroleum Co., Englewood, N. J., on October 1.

A. F. H. PAYNE

Mr. Payne is serving Sherwood as general sales manager.

B & L Labs. Brings Suit

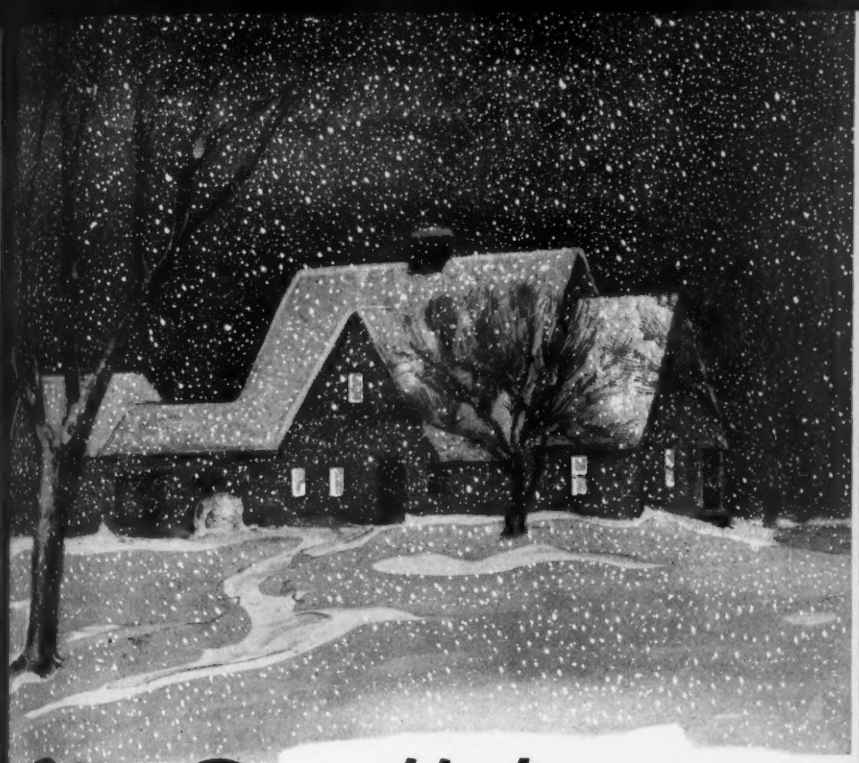
To protect the users of Usa-Foam Million Bubble Bath from inferior imitations, the maker of this bubble bath, B & L Labs., Inc., Chicago, is bringing suit through its attorneys against imitators who are infringing on Usa-Foam's registered trade-marks—"Usa-Foam," "Million Bubble Bath" and "Bubble Bath." The company feels that in protecting the product's name, it is also guarding the stores who handle the item and the ultimate purchasers.

McCallister to Vitamins Plus

Charles McCallister, formerly sales promotion man and sales researcher for Vick Chemical Co., has been made sales manager of Vitamins Plus, Inc. Mr. McCallister will be in charge of all domestic sales of the proprietary vitamin preparation under the supervision of vice-president William S. Leckie. Previous to this appointment, Mr. McCallister had accumulated several years' field experience with Vicks in selling, promotion and sales research.

Dr. D. Jayne Names McQuaide

C. G. McQuaide has been appointed director of domestic sales by Dr. D. Jayne & Son, Inc., Philadelphia. Mr. McQuaide comes to Philadelphia from Chicago where he has a long record of achievement in the field of commodity merchandising and distribution, through wholesale, department store and chain store channels.



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PURITY...the reason Baker's Fine Chemicals are so widely known, so greatly relied upon.

PURITY...supplied in a variety of convenient forms—large and small crystals, granular, powdered—to meet manufacturers' specific requirements.

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Men, methods, products in convenient form—these have built a host of friends for the J. T. Baker Chemical Co. The result is constant, repeat business—the finest proof of the esteem customers have for the J. T. Baker Chemical Co. and its products.

Get acquainted with this company and its many distinctive products. Choose a Baker pharmaceutical chemical and compare it with what you may be using. That's the way Baker has won new friends and continued to hold old customers. See the Baker representative the next time he calls. You will find him the type of man with whom you like to do business.

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- Potassium Iodide
- Magnesium Oxide
- Magnesium Carbonate
- Cream of Tartar
- Bismuth Subcarbonate—Subnitrate and other Salts
- Caustic Potash and Soda Sticks and Pellets
- Rochelle Salt
- Lead Acetate
- Salicylates

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for Pharmaceutical Manufacturers

(In Panel) Photographic enlargement of the crystalline structure of Baker's Fine Chemicals

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Powerful artificial civets, particularly useful as fixatives in soap and general perfumery.
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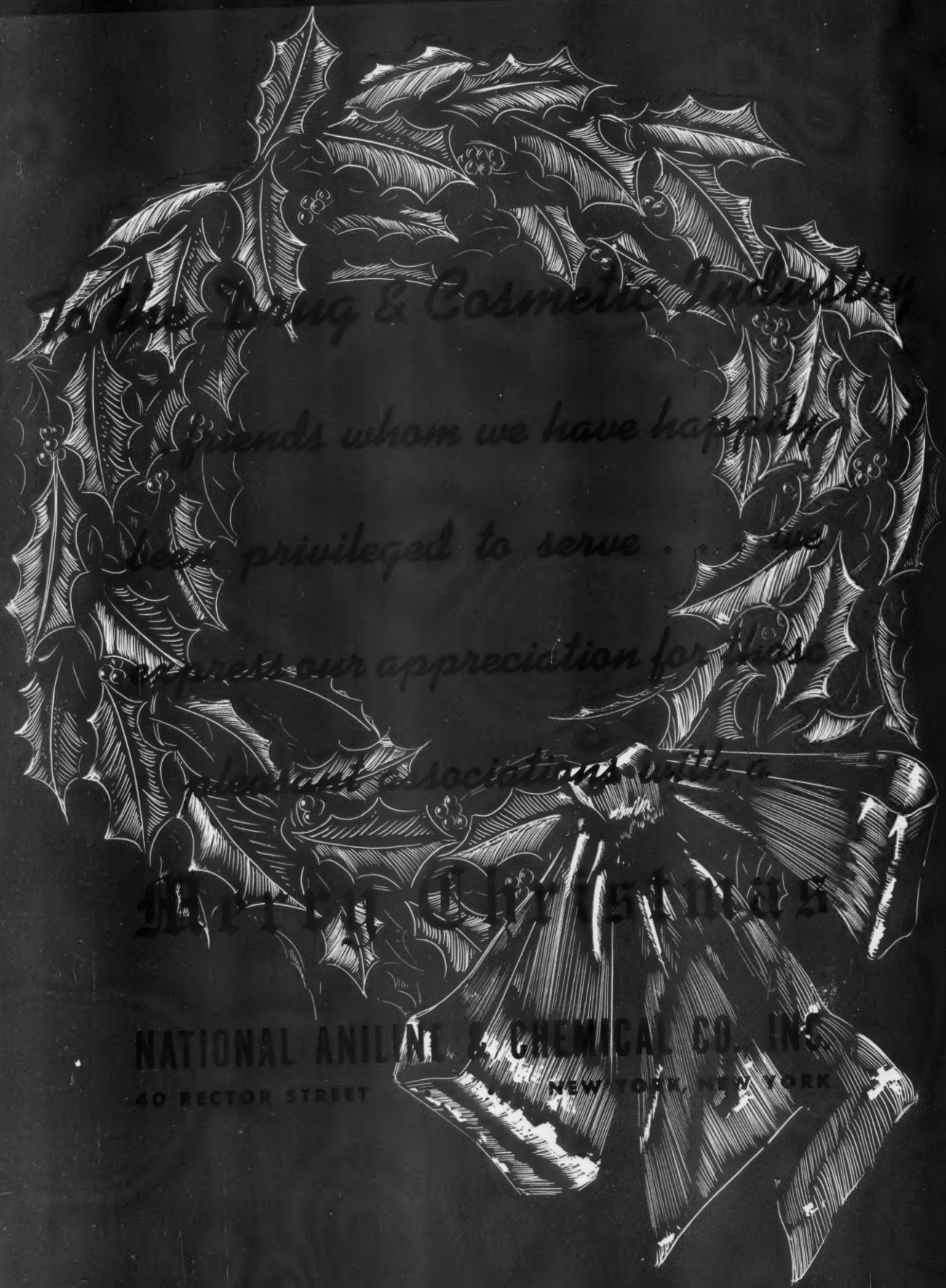
To the Drug & Cosmetic Industry
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been privileged to serve . . . we
express our appreciation for these
pleasant associations with a
Merry Christmas
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Florin Hailer Advanced

The United Drug Co., Boston, has made Florin J. Hailer controller of purchases and a member of the executive board. Mr. Hailer was formerly purchasing agent for raw materials.

Clough Speaks on Drugs and Defense

S. DeWitt Clough, president of the American Drug Manufacturers' Association, was one of the speakers on a half-hour program devoted to "Industry and National Defense" which was broadcast by the National Broadcasting Co., November 27.

Mr. Clough pointed out that more than a year ago there was organized the Drugs Resources Advisory Committee, also the Chemical Advisory Committee, both of which are now a part of the Commodity Division of the Army and Navy Munitions Board cooperating with the National Defence Commission in the study of strategic, critical and essential medical supplies and chemical materials.

He also stated that America is less dependent on foreign sources for its chemicals than it was in 1918 and that this country is already assisting other nations with medical supplies and cooperating closely with the American Red Cross, the Surgeon General's office, the Army and Navy, Veterans' Facilities, Governmental Health and Medical Agencies.

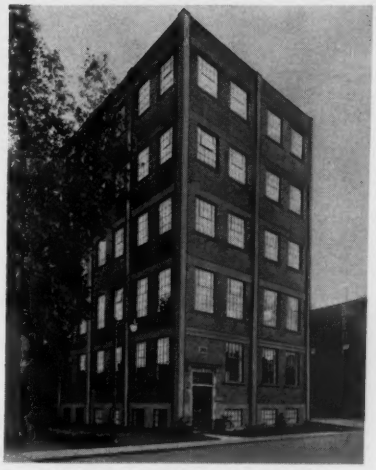
Miss Cantrell in M.M.& R. 20 Year Club

Ruth Laura Cantrell has become the first female member of the Magnus, Mabee & Reynard 20-Year Club. Miss Cantrell is supervisor of labeling and the small package division. She became a member of the 20-Year Club at a dinner given in her honor November 8 at the Wivel Restaurant and attended by thirty members of the MM&R organization. George McGlynn, treasurer and R. B. Magnus, vice-president, were the only male members of the MM&R organization in attendance. A handsome gift was presented to Miss Cantrell in appreciation for her twenty years of service. She joins such prominent members of the MM&R 20-Year Club as P. C. Magnus, J. B. Magnus, R. B. Magnus, William Fischer, sales manager, and George McGlynn, treasurer.

Abbott Expands in Canada

Increased sales in Canada have made it necessary for Abbott Laboratories, Ltd., a subsidiary of Abbott Laboratories, North Chicago, Ill., to move to larger quarters in Montreal. The plant has been moved to a six-story building purchased by Abbott at 20 Bates Road, Outremont, a suburb of Montreal.

The building is 80 x 40 feet of reinforced concrete and brick and has been thoroughly modernized. The three top floors are



ABBOTT'S CANADA BRANCH

used for storage, manufacturing and storage. The offices occupy the second floor while the first floor is used for a stock room and the shipping department.

Norwich Names Brennan V. P.

Thomas A. Brennan has been elected vice-president of Norwich Pharmacal Co., Norwich, N. Y. Mr. Brennan started his career with Norwich in 1915 as a salesman in Kansas City, Mo. He was made manager of the Kansas City division in 1924 and manager of the Chicago division in 1938, and is now manager of the West Central division with territory under his supervision extending from Michigan to New Mexico and headquarters in Chicago.

Herbert R. Anderson has been made assistant manager of the West Central division and R. Roy Wolfe will be the assistant manager of the Northern division.

Calco Moves in New York

The New York office of the Calco chemical division of the American Cyanamid Co. has been moved to 30 Rockefeller Plaza where the offices of the parent organization are located. The new telephone number is CIrcle 7-4150.

Hamilton Joins Premo

Thomas P. Hamilton has joined the Premo Pharmaceutical Laboratories, New York, as sales promotion manager. Mr. Hamilton was formerly with Johnson & Johnson and more recently with Charles E. Frosst & Co.

Interdonati Joines Penick

Henry R. Interdonati has been appointed manager of the special products department of S. B. Penick & Co., New York. Mr. Interdonati started his business career in 1921 when he entered the employ of Charles L. Huisking & Co. He was a member of the Huisking sales staff for fourteen years. In 1935 he became associated with the Enequist Chemical Co., Brooklyn, which he leaves to assume his new duties with Penick. Mr. Interdonati is a member of the New York State Bar.

Griswold-Sharp & Dohme Director

B. H. Griswold III has been elected a director of Sharp & Dohme, Inc., Philadelphia. Mr. Griswold fills the vacancy on the board created by the resignation of A. B. Griswold.

Financial

Union Carbide Dividends

Union Carbide and Carbon Corp. has declared a dividend of 75 cents on the common stock, payable January 1, 1941. Excluding the current declaration, dividends for 1940 amount to $2.30 a share, compared with $1.90 received by stockholders in 1939.

Crown Drug Net Up

Crown Drug Co. reports for the year ended September 30 a net income of $139,763, equal to 21 cents each on 442,439 shares of common stock and comparing with a net profit of $89,293, or 8 cents a common share, in the preceding year.

Cunningham Net Up

Cunningham Drug Stores, Inc. and subsidiary report for the year to September 30 a net profit of $608,891, equal to $3.10 a share on 190,798 common shares. The net profit for the year ended December 30, 1939 was $521,816, or $2.61 a common share.

Parke, Davis Earns Less

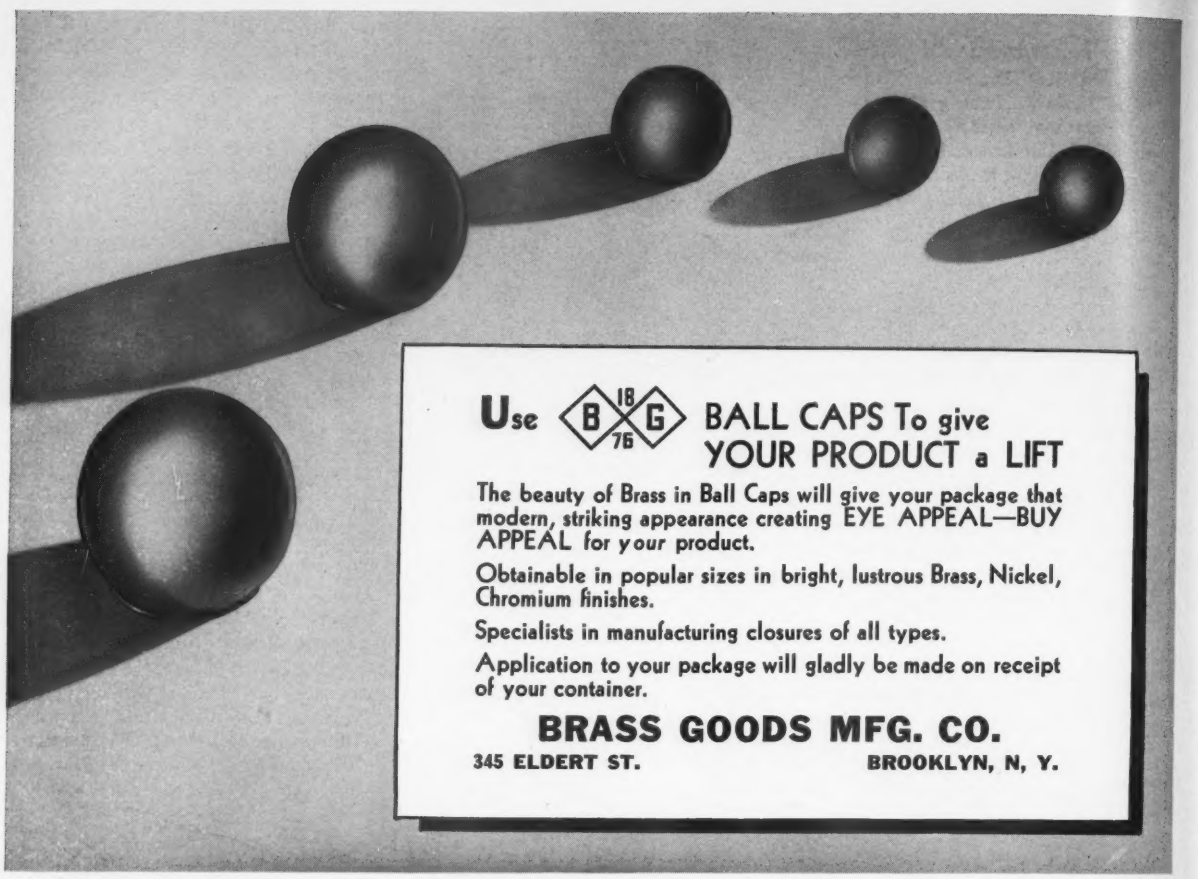
Parke, Davis & Co. and subsidiaries report for the nine months to September 30 a net income of $5,884,438. This is equivalent to $1.20 a share on 4,895,749 common shares and compares with a revised net of $7,106,577, or $1.45 a share for the nine months ended September 30, 1939.

Net profit from foreign operations in the nine months' period this year through foreign branches and sales made direct in the United States was approximately $1,765,000, of which $1,600,000 was received in United States funds.

For the twelve months ended September 30 the net profit was $8,032,063, or $1.64 a share, comparing with a net profit of $9,232,890, or $1.88 a share in the preceding twelve-month period.

United Drug Earns $122,376

United Drug, Inc. and subsidiaries report for the September quarter a net profit of $122,376, equal to 9 cents each on 1,400,560 shares of common stock and contrasting with a net loss of $246,997 in the preceding quarter and comparing with a net profit of $160,955, or 11 cents a share for the corresponding quarter last year.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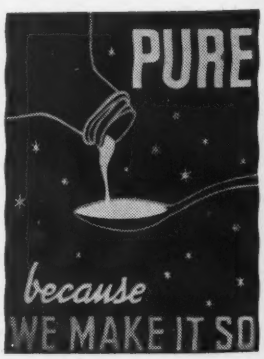

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For the nine months to September 30, 1940, the net profit was $96,234, or 7 cents a share, contrasted with a net loss of $21,347 in the first nine months of 1939.

Walgreen Earns More

Walgreen Co. and subsidiaries report for the fiscal year ended September 30 a net profit of $3,149,541, equivalent to $2.10 a share on 1,292,485 common shares. This compares with a net profit of $2,852,206, or $1.87 a share in the preceding year.

Net sales for the year were $74,293,160, against $70,765,501 the previous year.

Charles R. Walgreen, Jr., president, said in his statement that during the year the company had opened twenty-five new stores and remodeled and enlarged several others. The cost of this work, with the exception of removable fixtures installed, was charged against the year's income. The company closed or disposed of thirty stores in the year.

Obituaries

W. F. Allen

W. F. Allen, attorney for the National Wholesale Druggists' Association, died November 11 in New York after a long illness. He was fifty-eight years old.

Mr. Allen had been one of the nation's principal advocates of fair trade legislation.

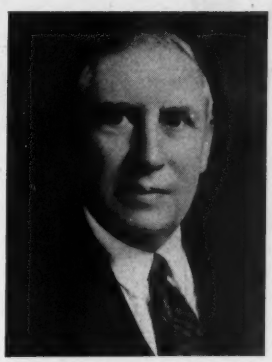
H. A. Baker

Herbert A. Baker, president of the American Can Co., died at the New York Hospital, November 25 after a month's illness. He was fifty-nine years old.

Dr. Baker, who was born in Oshawa, Ont., had been associated with American Can Co. and subsidiary companies since 1906, a short time after his graduation from the University of Toronto, and had been president of the company since September, 1936.

Four years after entering the company in 1910, after service with subsidiary companies (the Chemical Reduction Co. and the Paulsboro Detinning Co.) he was made chief chemist, with headquarters in New York. He continued in this position, except for wartime service with the Tin Apportionment Committee of the United States Food Administration in Washington, until 1918 when he was made district sales manager (Packers Can Sales) at Chicago. He remained in Chicago until November, 1932, when he was made vice-president in charge of sales with headquarters in New York. He was elected president in September 1936.

In 1933 Colgate University conferred the honorary degree of Doctor of Science on Mr. Baker in recognition of his contributions to the scientific canning of foods.



DR. H. A. BAKER

Dr. Baker, who is survived by his wife and two daughters, lived in Scarsdale, New York.

Joseph De Lorme

Joseph De Lorme, president of Riviera Products Co., Chicago, died November 26. Mr. De Lorme had been a member of the Chicago Drug and Chemical Association for many years.

Robert Louis Gray

Robert Louis Gray died Oct. 30, at his home in Nutley, N. J., after a short illness. Mr. Gray who was fifty-three years old was with the new products division of the Bayer Co., New York, and had been with the company for fifteen years.

Roberdeau A. McCormick

Roberdeau A. McCormick, retired vice-president of McCormick & Co., Baltimore, died suddenly November 18 after a short illness. He was eighty-four years old.

Mr. McCormick was born in Dover, Va. and, after his granduation from Washington and Lee University, he taught school for a few years before going west where he operated copper mines at Bingham, Utah, and still later silver mines at Cherry Creek, Nev. In 1891 he was persuaded to return east and to associate with his brother, Willoughby M. McCormick, who was then operating a flavoring extract business at 415 German St., Baltimore. He remained with McCormick & Co. until his retirement in 1934.

Mr. Roberdeau McCormick advocated the company's entry into the spice business and later he was instrumental in bringing about its entry into the insecticide field.

Albert W. Moore

Albert W. Moore, Philadelphia district representative for the Drug Products Co., Chicago, for the past fifteen years, died November 17 in Brookline, Pa. He was forty-five years old.

Henry Hurd Rusby

Dr. Henry H. Rusby, authority on materia medica and botanical drugs and former dean of the College of Pharmacy of Columbia University, died at his home in Sarasota, Fla., November 18. He was eighty-five years old.

Dr. Rusby was born in Franklin, N. J., April 26, 1855, and became interested in botany as a boy. In 1872 he entered the Massachusetts State Normal School where he specialized in the subject and in 1876 at the Centennial Exposition he was given a medal for his herbarium of plants of Essex County, N. J. When he left the normal school in 1874 he studied for a year at the College of Physicians and Surgeons of Columbia University. When family financial reverses made it impossible for him to continue his studies, he was appointed an agent by the Smithsonian Institution and headed expeditions into the southwest to collect plants in 1880, 1881 and 1883.

Wishing to continue his eduaction, he applied to Parke, Davis & Co. for a position. The company offered to put him through college in this country and in Europe if he would agree to work for them for five years after graduation. Instead, he sold them his herbarium for $40 a month for the rest of his college course and was graduated from the University Medical College of New York University in 1884.

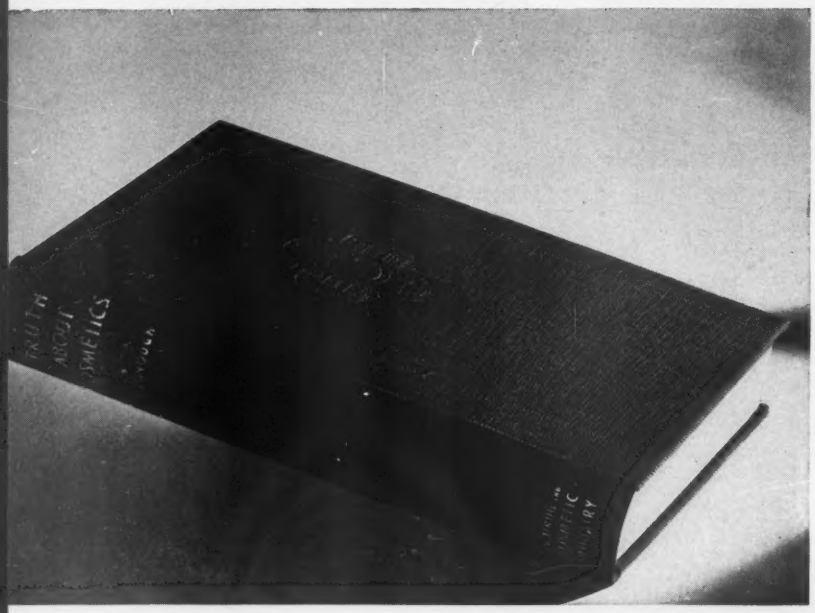
Soon afterwards, he led an expedition to South America to secure information on cocaine. In Bolivia, he collected 20,000 pounds of the leaf which, valued at $250,000, was lost in a revolution in Columbia. He then made an expedition to the headwaters of the Amazon and returned, several months after he had been given up for dead, with 45,000 specimens, many hundreds of which were unknown.

In 1888 Dr. Rusby became professor of botany, physiology and materia medica in the Department of Pharmacy at Columbia University. At that time there were no requirements for the study of pharmacy and he immediately initiated a move to require the completion of at least one year of high school. After a fight of twenty-five years, he finally succeeded in having a law passed making a high school education a pre-requisite to the study of pharmacy. He was also active in the fight for the standardization of drugs and cooperated with Dr. Harvey W. Wiley in urging the passage of the 1906 pure food and drug law.

Dr. Rusby was a member of the revisions committee of the seventh, eighth and ninth editions of the U. S. Pharmacopoeia and of the revisions committee of the National Formulary.

When he was over sixty, he headed an expedition to Colombia which discovered the rare drug, caapi. In 1929 he was awarded the Tanbury medal of the British Pharmaceutical Association and in 1938 he received the Fluckiger medal of the German Apoteker Verein. He had also received honorary degrees from the Philadelphia College of Pharmacy and Science and Columbia University.

SPECIAL HOLIDAY OFFER



Sequence of Chapters

1 **Benefits of Cosmetics**
2 **History of Cosmetics and Perfumes**
3 **The Skin**
4 **The Skin,** *Continued*
5 **Allergy**
6 **Cosmetic Dermatitis**
7 **Romance of Cosmetic Raw Materials**
8 **Cosmetic Colors**
9 **Cold Cream and All-Purpose Creams**
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13 **Face Powders**
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29 **Beauty Shop and Operator**
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INDUSTRY'S BOOKS

Any book reviewed in this section can be purchased direct from THE DRUG AND COSMETIC INDUSTRY at regular publisher's price.

Textbook Of Botany, by E. N. Transeau, H. C. Sampson, L. H. Tiffany, 812 pp., Illus., Harper & Brothers Publishers, New York, Cloth, $4.00.

The marked trend in recent years away from morphological emphasis in general botany courses, and toward the study of the whole range of living plant activities, accentuates the importance of Textbook of Botany. This is in every sense a modern text. It gives greater attention to physiological and ecological considerations than does any comparable text, and incorporates many of the great advances made by plant physiologists, ecologists, geneticists, pathologists, and bacteriologists in applying botanical science to human welfare. Textbook of Botany presents an organized unit of fundamental facts, principles, ideas, and methods of all phases of botany. Classification is subordinated to its legitimate role, ample morphology is included without any morphological emphasis, and structures and life histories are presented without making them the center of interest. A variety of approaches make the text adapted to different seasons and localities, all of them taking the student out of doors at once. Problems and questions are woven into the text at frequent intervals. The book is well illustrated and attractively conceived.

Handbook For Chemical Patents, by Edward Thomas, A.B., 270 pp., Chemical Publishing Co., Inc., New York, Cloth, $4.00.

The Law of Chemical Patents (Thomas) summarizes that law up to the middle of the year 1937, but many changes have come into patent law in the last few years, partly through eight hundred citations of new decisions pertinent to chemical patents, and partly through amendments to the Patent Statute. To present the effect of these changes both in Statute and in attitudes of the Courts, the present book summarizes the law presented in the author's earlier book, referring to the pages of that book for details and for citations of cases, and also presents the new phases of patent law in more detail. Thus the present book is both a handbook for the general reader interested in chemical progress and a supplement to the earlier book to enable attorneys to locate rapidly any pertinent new cases on chemical inventions decided in the last two and one-half years.

Vitamins, What They Are And How They Can Benefit You, by Henry Borsook, Ph.D., M.B., 193 pp., The Viking Press, New York, Cloth, $2.00.

Henry Borsook, professor of biochemistry at the California Institute of Technology, has lectured to thousands of men and women on the subject of vitamins and more abundant health. One startling fact that emerges from this volume is that virtually nobody receives a supply of vitamins sufficient for living at the highest health level. We get enough of them, perhaps, to ward off rickets, pellagra, and beri-beri. But defective vision, dyspepsia, premature middle age, bad teeth, bad bones, and a host of other miscellaneous ailments are also often the result of vitamin deficiency. Most important of all, greater energy, greater vitality, greater resistance to disease are within the reach of every man, woman, and child who will follow Dr. Borsook's simple suggestions. Of particular value and interest is the various tables giving the sources of vitamins, the vitamin content of foods, and proper menus for providing an adequate general vitamin diet for better health.

The Applications Of Chemical Engineering, Edited by Harry McCormack, 431 pp., D. Van Nostrand Co., Inc., New York, Cloth, $3.50.

This text is a cooperative effort initiated and carried to completion by a group of members of the Chemical Engineering Division of the Society for the Promotion of Engineering Education. The basis for the evaluation of the material included in the book has been threefold: satisfactory use in a private laboratory over a period of time; suitability for use with simple equipment that is readily available or that may be constructed without undue difficulty; and, finally, each experiment is definitely related to the theoretical presentation of chemical engineering and possible of accomplishment in a single four hour laboratory period. Contents: Chapters I—Measurement of Temperature; II—Flow of Fluids; III—Flow of Heat; IV—Evaporation And Evaporators; V—Distillation; VI—The Drying of Solids; VII—Humidification and Dehumidification; VIII—Gas Absorption; IX—Filtration; X—Classification and Concentration of Solids; XI—Size Reduction.

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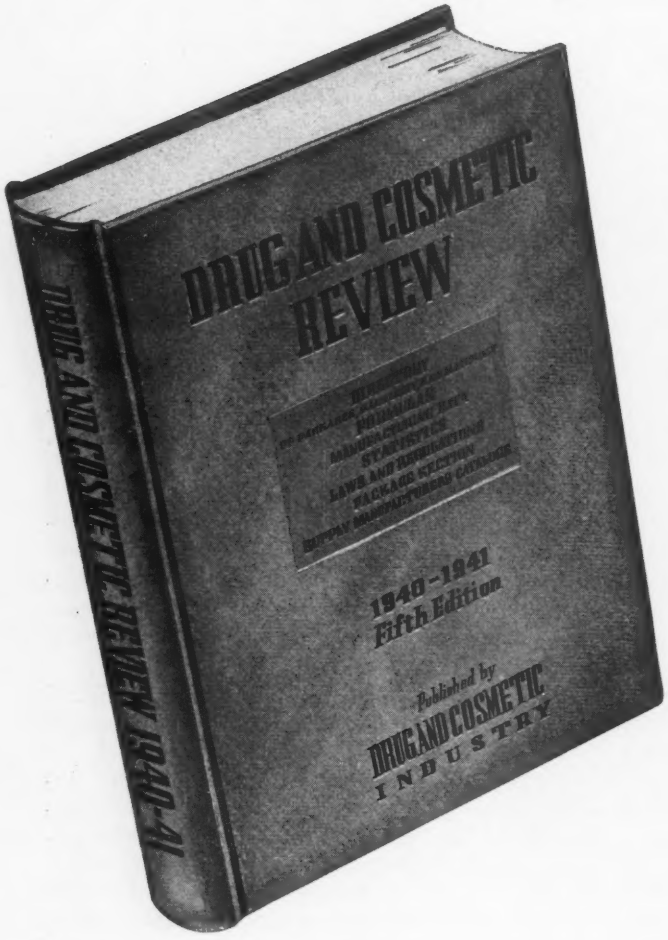

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Detailing The Physician, by Tom Jones, 214 pp., Romaine Pierson Publishers, Inc., New York, Cloth, $2.75.

The correct training of detail representatives is of great importance to all firms whose employees contact the medical or allied profesisons. This work outlines basic fundamentals for the new man and acts as a source of new ideas and inspiration for the experienced representative. Its contents contain the proven methods of productive detailing as practised by nationally known manufacturers. Table of Contents: How To Become A Detail Man; Days in Training; First Days in The Field; Overcoming "Doctor Fright"; Presenting The Product Intelligently; Detailing in Special Fields; Analyzing Your Efforts; Self-Improvement; Making Details Count; Reports To The Firm; The Importance of The Hospital; Relation of The Detail Man to Pharmacy; Combining Detailing and Selling; Sampling; Attendance at Medical Conventions; Puting Principles Into Practice; What Does the Future Hold?

Controllership, Its Functions and Technique, by John H. MacDonald, 134 pp., Controllers Institute of America, New York, Cloth, $2.00.

This book has been prepared in response to the demand, especially on the part of business executives, directors, and bankers, for material answering the question, "What is a controller and what does he do?" It is not intended to be a controller's handbook nor a treatise on the details and technicalities of accounting and other procedures. Rather, the purpose is to cover the application of these by the controller to the management job. Contents: Sections I—What is Controllership? II—Functions of the Controller; III—Relations Between Controllers and Public Accountants; IV—Relations of Controllers with Governmental Bodies; V—The Controller's Relation to Company Policies and Management; VI—Controllers' Reports and Their Interpretation.

Handbook of Chemistry And Physics, 24th Ed., 2581 pp., Chemical Rubber Publishing Co., Cleveland, $3.50.

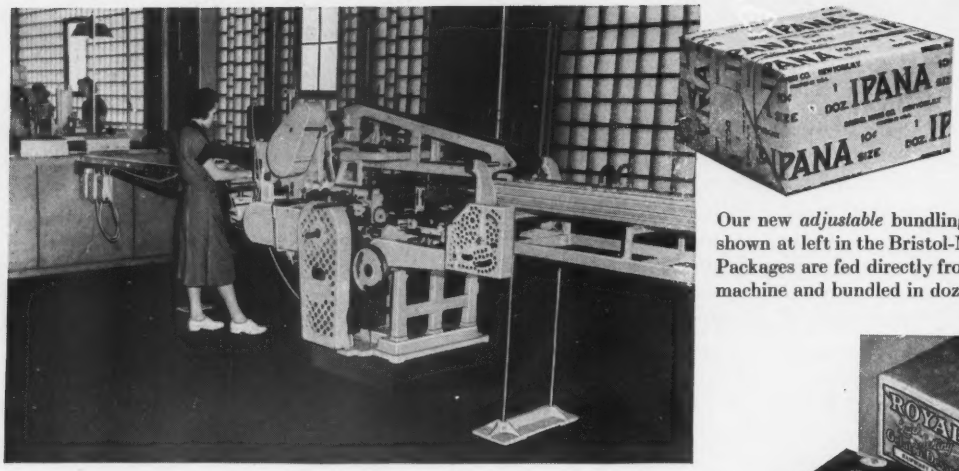
There are five general divisions of subject matter in the Handbook of Chemistry and Physics. Division I—This division consists of mathematical tables and occupies 320 pages. The list is very comprehensive and satisfies the requirements of all the usual courses of pure and applied mathematics, and also the needs of engineers and others engaged in industry. Division II—The major portion of data in this division, under the general heading Properties And Physical Constants, has undergone recent complete revision, especially the tables of Physical Constants of Inorganic, Metal-Organic and Organic Compounds and Properties of Commercial Plastics. The new tables on Physical Constants of Industrial Organic Compounds, Induced Radioactivities, Melting Point Index and Boiling Point Index of Organic Compounds are very useful. Division III—General Chemical Tables, and Specific Gravity and Properties of Matter are the two general sections of tables in this division. The data included are essential in connection with the work of every chemist. Necessary revision has been made of the important tables on Graviemetric Factors, and Composition and Value of Foods. Division IV—in this division is included information on Heat and Hygrometry, Sound, Electricity and Magnestism, and Light. Division V—This division includes Quantities and Units, Conversion Tables and Miscellaneous Tables that are needed daily by scientists generally. A 31 page complete Cross Index is provided. This, together with a detailed Table of Contents and the Divisional Guides, makes the finding of required data very easy. Editor in Chief is Charles D. Hodgman, M.S., Associate Editor, Harry N. Holmes, Ph.D. In addition 164 collaborators have contributed to this handbook.

Why Is The World Sick?, by Paul K. Lipps, M.D., 136 pp., Christopher Publishing House, Boston, Cloth, $1.50.

In answer to the question, "Why is the world sick?" there are many theories, old and new. The author of this book states that "sickness is caused primarily and basically by one common underlying condition: the presence, work, and poison of certain parasites within the human body." The most prominent and probably the most dangerous work of these poisons is that of generally weakening the body's resistance, robbing the body of its energy and reserve power, and at the same time attacking any such part of the body, mucous membranes, muscle or nerve fiber, that may at that time be a bit weaker than the rest. The discussion in this book is backed by eighteen years experience in actual clinical treatment and research. Case records show that about 80 per cent. of so-called incurable cases have responded to the treatment devised as a result of these years of work.

Chemical Industries, 363 pp., size 9 x 11 inches, Chemical Publishing Co., Inc., New York, Cloth, $4.00.

This is a reference work to essential chemical facts and data, published annually by Leonard Hill Limited, London. The work is divided as follows: Section I—Indexes to commodities, subject matter, etc.; Section II—Materials of construction used in the chemical industry; Section III—Power Plant. Informative matter on the assembly and use of boilers, compressors, etc.; Section IV—Factory equipment layout and location; Section V—Size reduction, mixing and blending plant. Mills, disintegrators, crushers, emulsifiers, flaking, tableting, mixing, sifting, tables; heat, power, etc.; Section VI—Separating and Grading; Section VII—Handling, conveying and transport of materials; Section VIII—Instruments and laboratory apparatus; Section IX—Raw and partly manufacturee materials and heavy chemicals; Section X—The raw materials of perfumery, fine chemicals, pharmaceutical perfumery and drugs; Section XI—Mathematical tables; Section XII—Bibliography.



Our new *adjustable* bundling machine is shown at left in the Bristol-Myers plant. Packages are fed directly from cartoning machine and bundled in dozen lots.

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New Opportunities for Large Savings

Now manufacturers may bundle several different sizes of packages on a *single* machine . . . The introduction of this new, *adjustable* bundler is an important step ahead—it means that many more concerns can now take advantage of the large savings which machine bundling makes.

Replacing costly made-to-order boxes, the bundling machine wraps the packages in a strong kraft paper which carries safely. Many manufacturers have saved as much as 60% on material costs. Moreover, shipping costs are greatly reduced as the paper weighs one-third as much as cardboard containers. Machine bundling also saves the floor space formerly required for storing and packing stocks of bulky boxes.

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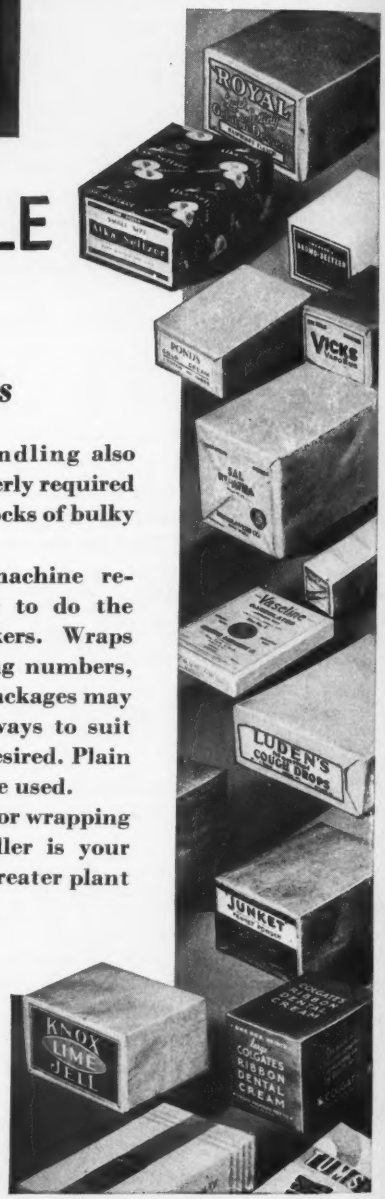

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Over a Quarter Billion Packages per day are wrapped on our Machines

PRODUCTION FORUM

BY Francis Chilson
PRODUCTION ENGINEER

ELECTRONIC LEVEL CONTROL

Photoswitch electronic level control type P30 at last makes available to industry a simple electronic relay for level control of both conductive and non-conductive fluids and powders. Equipment is available to meet all specifications including single level control, on and off control at two levels, boiler feedwater control, and tank condensate signals. Installation merely entails attaching a probe fitting to the surface of the tank. Since the equipment includes no mechanical parts, and has an unlimited life, it is replacing more complicated float switches.

For two-level control Photoswitch probe fittings or electrodes are attached to the tank at levels representing the low point where pumping starts and the high level where pumping stops. These probes are wired to the Electronic Level Control. When the liquid level falls below the lower probe, Level Control closes the circuit which starts the pump, and the tank fills. When the Level rises to the upper probe, the fluid itself acts as a conductor of the small amount of current required for the operation of the Level Control. This opens the pump control circuit.

Even when used with non-conductive fluids the probe circuit carries only milliamperes of current and low voltage. For this reason Type P30 is used with combustibles. Liquid Lever Controls Type P30 is recommended in connection with all conductive fluids as well as such insulators as: resin, latex, paraffin, linseed oil, shellac, mineral oil, wax, waterglass, lacquer, and thinner. Special tank fittings are available for use in corrosive liquids. The Electronic Level Control is made by Photoswitch Inc., 21 Chestnut St., Cambridge, Mass.

KATHABAR

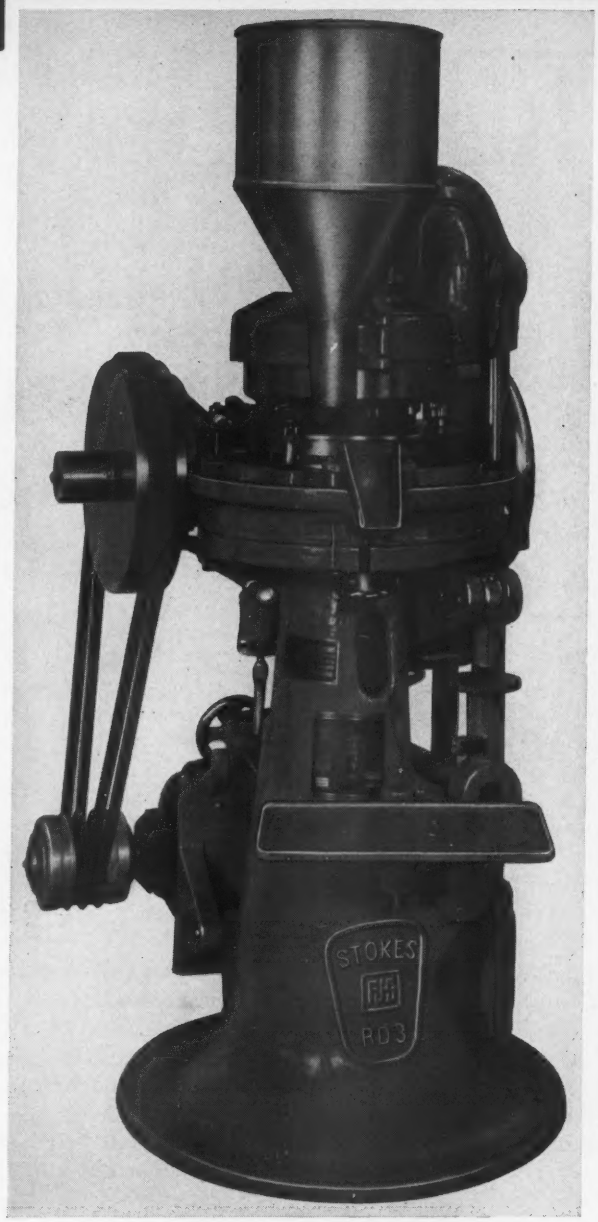
This is the trade name for a direct system of air conditioning produced by Surface Combustion Co., Toledo, O. The Kathabar system is said to meet every air conditioning requirement such as positive control of humidity through all seasons of the year, regardless of outside conditions; cooling to temperature desired; heating to temperature desired. This is accomplished by the use of a liquid dehydrating material known as Kathene. Kathene is a non-inflammable, non-explosive, odorless liquid entirely harmless. The system is charged with this liquid and the design of the apparatus is such as to provide continuous regeneration and filtration of the dehydrating liquid. The system works as follows:

The air to be conditioned is sucked by fans through an assembly of cells formed by a number of metal plates both vertical and parallel. Nozzles at the top project the Kathene flow over the surface of these plates. The incoming air then passes between the Kathene-covered plates. Thus by passing the incoming air through this liquid it is claimed that all dust is removed, deodorizing is accomplished, and the desired humidity is established. The dirty Kathene flows downward through the cell unit to a regenerator where it is reconditioned by means of steam. It is, of course, filtered at the same time. The air discharged from the cell unit is then passed to cooling or heating coils depending on temperature requirements and recirculated to conditioned areas. It is claimed that the liquid causes the vapor pressure of the air to equalize with its own vapor pressure on contact and that as a consequence a flow of moisture from one to the other is accomplished depending on which has a lower vapor pressure. Since it is claimed that the vapor

D-3 The Double-Duty Tablet Machine

for

PRECOMPRESSING and COMPRESSING



In preparing granulations for making tablets, precompressing or "slugging" is often the best and most economical method . . . in many cases it is the only satisfactory method. It eliminates wet mixing and drying operations, simplifies the problem of combining incompatible materials, is successfully used in handling heat-sensitive, moisture-sensitive and other troublesome formulas.

To prepare granulations by this method materials are first precompressed into oversize tablets or "slugs." These are then reduced in a Stokes Oscillating Granulator to uniform granule size suitable for compressing into finished tablets.

The Stokes D-3 machine was developed especially for feeding fine powders, is heavy and rugged, is equipped with our patented Excess Pressure Release that prevents possible damage to the machine in precompressing or compressing operations. It also has an improved variable speed drive that makes quickly available the most efficient operating speed for any specific material.

D-3 is a double-duty machine, ideal for precompressing powdered formulas and well suited for making, from granulation, finished tablets or lozenges from ⅜" to 1" dia. Let us tell you more about it.

For further information on precompressing methods, equipment for either large or small scale production, recommendations or any other help in preparing granulations or making finished tablets, consult with our engineers and make use of our laboratory facilities.

F. J. STOKES MACHINE CO.
5932 Tabor Road Olney P.O. Philadelphia, Pa.
Representatives in New York, Chicago, Cincinnati, St. Louis, Cleveland, Detroit, Boston
Pacific Coast Representative • L. H. Butcher Company, Inc.

F.J.Stokes TABLET MACHINES PHARMACEUTICAL EQUIPMENT FJS Est. 1895

pressure of Kathene can be very accurately controlled, the moisture content of the air coming into contact with the Kathene is thereby accurately controlled. Changes in humidity are achieved regardless of outside conditions of temperature and humidity merely by creating the desired vapor pressure in the Kathene. This is accomplished by changing the temperature of this liquid. It is claimed further that this stystem can be incorporated into any air conditioning system and that since it uses only two simple control instruments and a series of standard valves, skilled labor is not required to maintain the system.

BREAKING IN NEW MACHINES

The introduction of unfamiliar types of machinery even though they are standard units long used for a particular purpose is always attended by a certain amount of grief. The grief often is caused by the old timers who know before the equipment is installed that it won't work. These old timers so frequently forget that in changing the equipment with which a given product has been made for many years it is sometimes necessary to change manufacturing procedure also to allow for conditions peculiar to the new equipment. On numerous occasions we have, for example, used the Lenart mixer for making ointments and creams. We have seen two plants making identical ointments get highly variable results. One plant turned out a product much better than it had been theretofor. The other plant could not make the same ointment at all. Investigation showed that the foreman of the second plant was attempting to use the equipment without making due allowance for machine features which completely altered the standard procedure in making such an ointment. When the necessary changes in procedures were explained, the second foreman had no more difficulty but because he had changed the official procedure for making such an ointment, he was afraid that it was no longer a USP product. Although the USP clearly allows variations in manufacturing procedure to suit operating conditions in the various plants of the industry, many of the older workers look upon the USP with reverential awe. If the USP suggested the addition of a certain ingredient while standing on one's head, many of the old timers would certainly carry out these directions.

REPAIRING CRACKS IN CONCRETE FLOORS

Mr. W. F. Schaphorst of Newark, N. J., writing in a recent issue of the news edition of the *Journal of Industrial and Enginnering Chemistry* has this to say about repairing cracks and holes in concrete floors: "Every once in a while the problem of repairing concrete floors arises. What can be done with a bad crack that leaks water? How can a repair be made that will be both substantial and waterproof: Unless there is considerable vibration on the floor, waterproof it by first cutting out the crack into a V-shaped groove to a depth of at least 2 inches. Sweep water over the newly cut concrete, removing all loose particles of cement and sand. Prepare a stiff and waterproof mortar by mixing together one part portland cement and two parts clean, sharp sand, and wet down with a solution of one part liquid waterproofing and eight parts water. Immediately before filling the grooves with this new mortar, brush over the clean, damp surfaces a slush or bonding coat made by stirring into a solution of one part liquid waterproofing and three parts water enough portland cement to form a thick, creamy cold water paint. While this cement wash is still damp, apply the new mortar and trowel it to a smooth finish.

"In a similar way the ruts and holes in a concrete floor can be cut out to a depth of 1.5 inches below the finished floor and new patches applied, which will adhere to the underlying concrete, be waterproof, hard, and dustproof. Patches of this type harden overnight so that the repairs can be made on Saturday afternoon and Sunday or during a similar shutdown."

HOSE

B. F. Goodyear Co., Akron, O., have developed a new synthetic hose which should be interesting to operators of vacuum filling equipment. This synthetic tubing called Koroseal has no fabric or other wall reinforcement. It is claimed that a working pressure of 50 lbs. per square inch based on a safety factor of 5 is provided. It permits no loss of vacuum through diffusion. It will not swell in oil or other rubber solvents. It is not affected by strong corrosive chemicals and will not absorb moisture. It is said to be practically free from deterioration caused by oxidation or aging. It should not be used for handling hot materials because it softens at 150° F. This hose can be made in sizes up to 3″ outside diameter.

SILVER CLAD STAINLESS STEEL

The Jessop Steel Co., Washington, Penn., just notified me that they have obtained a ruling from the Committee on Unfired Pressure Vessels of the ASME on the use of silver clad stainless steel for making jacketed kettles and similar equipment. Silver clad stainless steel is very satisfactory in many difficult corrosion problems. You can get samples for test purposes from the above company.

AIR CLEANER

Chicago Mfg. and Distributing Co., 1928 W. 46 St., Chicago, makes a unit called the Textite separator for cleaning compressed air, gas, or steam. It is claimed that the installation of one of these little units in an air line will prevent any water, oil, or foreign matter of any kind from getting through. This unit removes foreign matter by centrifugal action and is so designed that there is comparatively little pressure drop through the air passages. It is very easy to maintain because it contains no moving parts and no filter units.

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Blending
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Speedy and thoro pulverizing in a single step—that's the One Step Mikro-Pulverizer. One pass thru the mill generally results in a finished product—pulverized and blended; no bolting or separating necessary.

Dustless operation without fans or cyclones. Astonishing savings in time and labor. Large and small units. Performance guaranteed.

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CAN YOU ANSWER "Yes" TO THESE FILLING PROBLEMS?

- Have you eliminated container finishing by hand?
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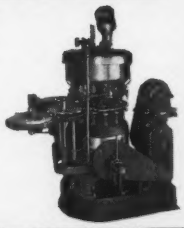
This FMC Special Filler enables you to answer "Yes" to every one because of:

NEW "Predetermined Level" FILLING

ASK FOR THIS DEMONSTRATION!

Send us a quantity of your product and containers. We will fill them with FMC Special Filler and send to you—or you can have one of your Representatives present to watch the filling operation. And we'll tell you *how fast* one operator can fill them. *No obligation.*



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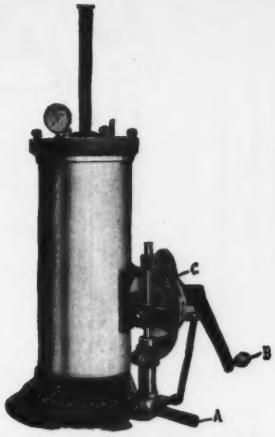

No. 3 Hand Paste Filler

Hand Tube Closer

Foot Power Crimper

Colton Hand Operated Machines

No. 3 Collapsible tube filler (hand operated) for tubes up to 1" x 5½" long.

Hand operated tube closer made in two sizes and styles to seal tubes with the Colton Clipless Closure or to seal tubes for applying clips.

Foot operated crimper for applying final corrugation to the closed end of the Colton Clipless Closure which gives it a decorative appearance as well as greater rigidity to the closed end of tube.

We also furnish this same machine without the crimping jaws for applying clips.

Our catalog No. 11 illustrates a variety of fillers and closers to suit production required. Please make us acquainted with your requirements and capacity, and we will be pleased to recommend machines best suited for your purpose.

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Here's what you'll like about the new

...''HAGERTY HANDY FILLER''

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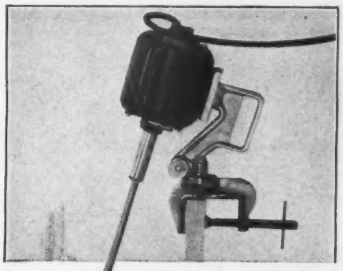
Really

HERE'S A GOOD MIXER



It's the *new* ERTEL SWIVEL JOINT MIXER —its development based on ERTEL'S experience with various makes and types of mixers. Find out now how the ERTEL SWIVEL JOINT MIXER can increase efficiency and minimize accidents in your mixing department.

MOTOR CAN'T SLIP

while making angle adjustments on the mixer shaft. This one feature alone is a "must" you can't afford to be without. Write now for further details and prices. You won't be obligated.

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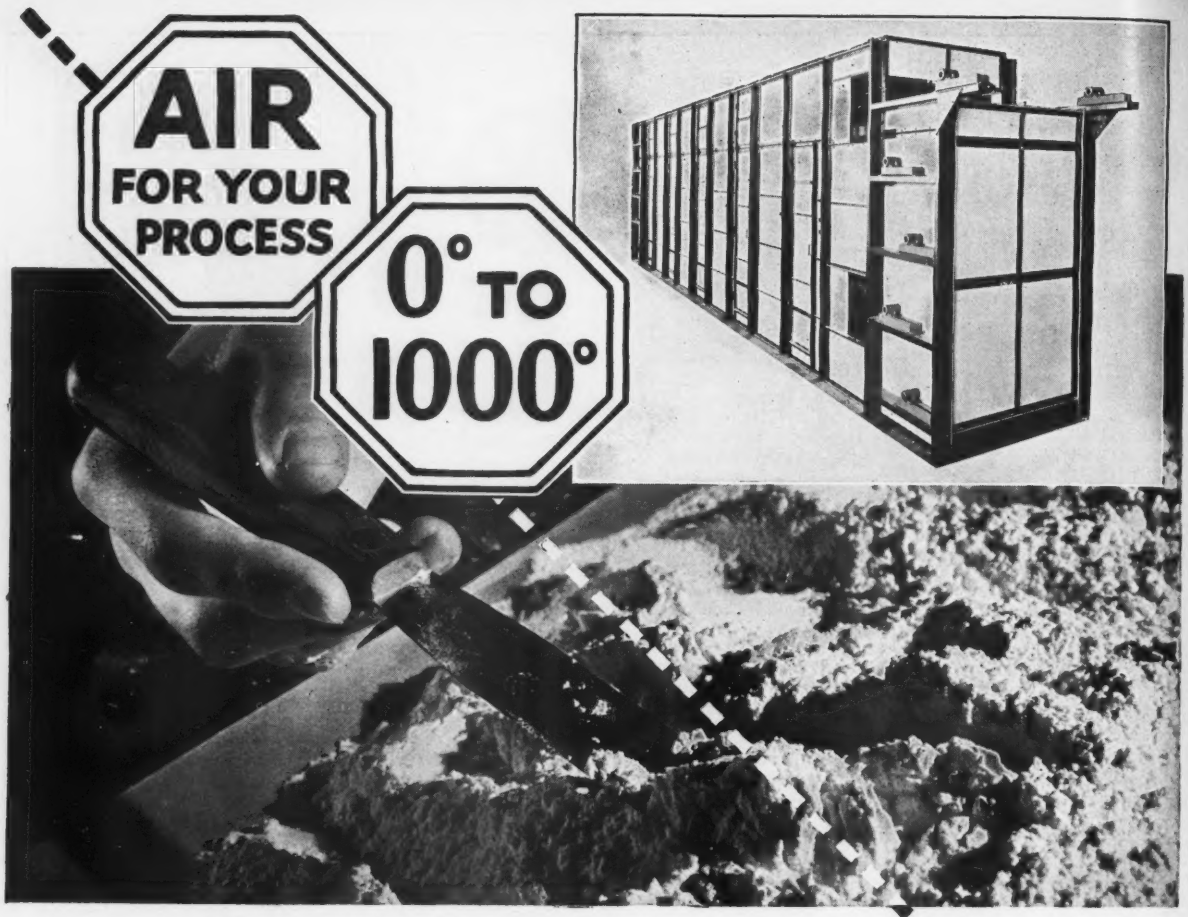

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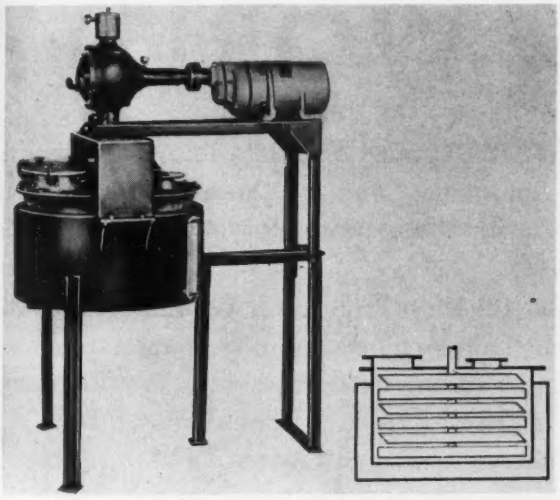
MIXER FOR PASTES AND HEAVY FLUIDS

A special mixer of stainless steel was recently designed and built by L. O. Koven Brothers, Jersey City, N. J. for a pharmaceutical plant which incorporates a number of features indicating a wide range of applications where the problem of mixing, dispersing, and processing thick fluids, viscous slurries, or pastes is apt to give trouble. This particular unit while comparatively small in capacity, holding about 50 gals., incorporates a mixing principle which can be applied to much larger units. The central shaft carries a series of flat, stainless steel mixing blades, with alternate blades vertical and the rest alternately set at approximately 45° from the vertical. The six mixing blades are quite closely spaced, being about ½" apart.

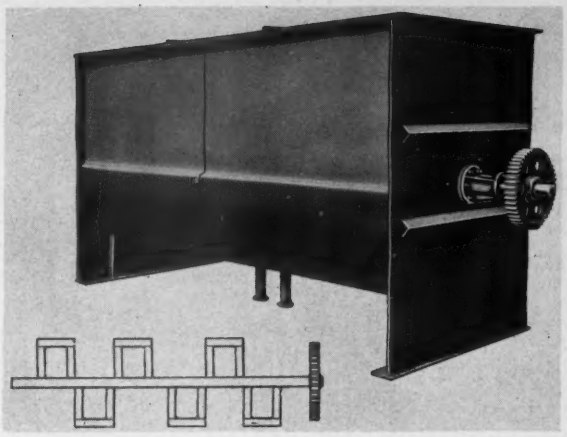
The result is unusually thorough mixing, due to the action of the off-vertical blades and the close clearance



of succeeding blades, Note the quick opening swing bolts on the manhole for charging, making for easy and speedy opening, while providing for either pressure or vacuum in service. The entire mixer is steam jacketed for operation at high temperature. A thermometer is provided to indicate the temperature of the mix.

Also designed by this company is a mixer built originally for flavoring syrups. Its primary purpose is to provide for speedy dispersion and solution of mixed ingredients in comparatively large quantities. The mixer is used on chocolate liquors and heat is an essential part of the mixing operation for which the heating jacket is provided. However, for many chemical and other process operations, the same mixer could be used not only for mixing under higher temperatures but for fast mixing of large charges at low temperatures, if a brine circulation were provided for. The mixer has a capacity of about 1,500 gallons of liquid. It is of welded steel construction, with outer steam jacket covering half the surface of the tank at the bottom.

The feature which should make it of interest to producers of syrups, chemicals, and other processed products is the thorough and speedy mixing action provided.



JACKETED MIXER

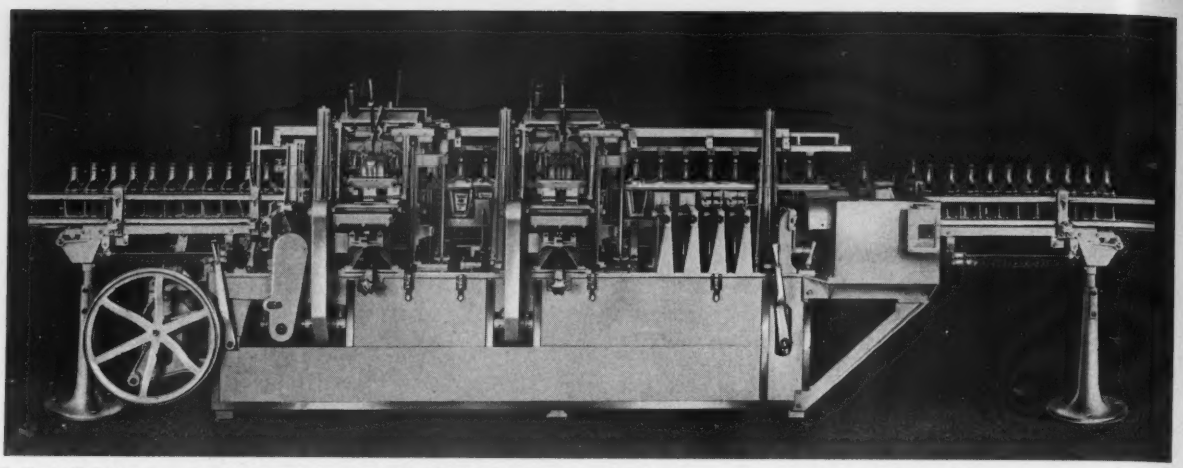
The central shaft indicated in the photo carries six U-shaped paddle mixers located in opposing position along the shaft, in alternation, so that not only is there a powerful mixing action caused by the sweep of each paddle through the liquid in its own path of revolution, but each paddle cuts through a zone of turbulance set up in the area between it and the next paddle in the same position. Since each paddle is set to come close to the bottom and sides of the tank for practically half of its inner surface, the result is extremely thorough and speedy mixing or, if the speed is increased, emulsification. The paddles are built up by welding suitably sized pieces of steel plate and hence are not only sturdy and capable of handling quite viscous mixers, but can be readily replaced at very small expense. Obviously many other metals of construction could be used to meet particular chemical and physical characteristics of any specific mixers.

BLENDER

H. K. Porter Co., 4930 Harrison St., Pittsburgh, Penn., has just issued a four-page bulletin describing their new double cone blender. Designed to eliminate waste of time and materials in the blending of face powders, chemicals, pharmaceuticals, and similar products, the machine is described in complete detail in the new circular. A chart listing sizes, horsepower required, weight, and other pertinent data, is included. Copy may be obtained by writing the manufacturer.

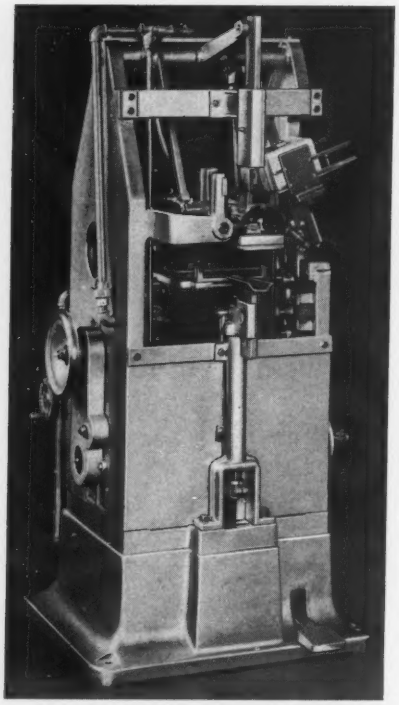
FACTORY LIGHTING

The introduction of fluorescent lighting has at last made it possible to secure uniform light throughout the plant without glare. Good lighting is economical because it permits better inspection of the product and hence improved quality control and it also increases output by providing a stimulating atmosphere for the workers and finally it goes a long way in preventing accidents. Lighting of 20 foot candles at working table height is very desirable. Glare should be eliminated through the use of properly designed fixtures and prop-



Bulletin D-5 has the whole story on the Model HS High Production WORLD Automatic Straightaway Labeler. May we send you a copy?

WHICH IS *Your* WORLD?



Bulletin CH-5 contains complete information on this Model CH WORLD Semi-Automatic Labeler. Write for it.

From the WORLD'S most complete line of Automatic and Semi-Automatic Labelers these two stand out as WORLD'S finest for proprietary, toiletry and cosmetic labeling.

The Model HS High Production WORLD Automatic Straightaway Labeler meets quantity production schedules on round, square, oval, panel, or flat bottles, flasks or other containers. It applies front labels or front and back labels at speeds up to 120 per minute.

The Model CH WORLD Semi-Automatic Labeler applies single labels to any type of container from ampoules up to 4" in diameter. Label sizes range from ¾ of an inch to 6½ inches square.

For complete specifications and quotations simply send us samples of your labeled containers.

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Builders of World Automatic and Semi-Automatic Labelers for Every Purpose

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erly shielded bulbs or tubes. Regular cleaning and inspection of all lighting fixtures should be placed on a periodic schedule.

DEPARTMENTAL SCHEDULING

In no department of the pharmaceutical business is departmental scheduling more necessary than in the operation of the tablet and pill department. The production of such a department depends entirely on the output of the tablet presses and pill machines. If these machines are kept operating at maximum speed for the maximum number of hours, an ideal condition is reached, but forty-hour operation for a given battery of presses is possible only when no changes in setups are required. At Grove Laboratories, for instance, the presses are kept operating at full speed all the time and are never stopped during the working week excepting for breakdowns which very rarely occur. Hence the output of the presses is enormous.

In the average tablet department, however, the presses are required to turn out a great variety of tablets. This means that the presses must be cleaned and oiled between runs and punches and dies must be changed and adjustments made. One very frequently observes in large tablet departments that not more than half the presses are running, not because of lack of work but because of necessary changes in setups.

In order to keep changeover time down to a minimum it is desirable to inspect all punches and dies when they are removed from the presses at the completion of the run and if careful inspection reveals that they need polishing, the polishing should be done immediately and not at the time the same set of punches and dies are required again. Oiling and cleaning preferably should be done before or after working hours and as much as possible over the noon hour. When presses are in good running order and are provided with an adequate supply of granulation, they should not be shut down over the noon hour because the extra hour of operation increases the daily output by a substantial percentage. Presses should always be setup and ready to run when the granulation is ready for them and a properly balanced tablet department should have a few extra presses of given models so that it is not necessary to delay compressing time while a press is being changed over. It is desirable also to schedule the work of the presses very carefully so that no press is required to wait for granulation. As a means of rating the performance of a compressing department, it is desirable to set up a standard based on the maximum output of each machine at full operating speed multiplied by the number of working minutes in the full week. Using such a figure as one hundred per cent. performance, one can rate the department on a percentage basis. In order to make such a percentage fair to the foreman who is in charge of the department, the work scheduled for a given month should be carefully balanced as between single punch and high speed multiple punch presses. Another and perhaps a fairer way to set up an operating standard is to multiply the scheduled output for a given month by the number of minutes of press time required to turn it out and then to use this as a basis against which to measure the performance of the department. No rating formula can be given which will apply to all plants because the type and speed of the equipment must be considered and this is never the same in any two plants.

In addition to scheduling the work of the compressing department, it is also desirable to do the same thing with the granulating and lubricating department so that a continuous flow of fresh granulation will be delivered to the presses. Here again the output of the mixing equipment must be balanced against the capacity of the drying equipment and this in turn must be balanced against the capacity of the lubricating equipment. As a starter it is desirable to determine what constitutes an economical batch. We have seen instances where the foreman of a granulating room got himself into a terrific jam by assuming that he would save time and avoid washing his equipment by turning out as fast as possible, a large amount of a particular granulation. The result was that he filled up all his drying closets and thus by being unable to dry anything else destroyed the flexibility of his department. Theoretically if a large quantity of a given type of granulation is required, time is saved by turning it out in as few batches as possible, but if press capacity is lacking to take the output as fast as it is turned out such a practice destroys the flexibility of the granulating department and is obviously not economical.

LIPSTICK MANUFACTURE

Although their purposes are somewhat different, the manufacture of lipsticks and suppositories is almost identical. I have been surprised that more attention has not been paid to the development of faster methods of casting lipsticks and suppositories. One manufacturer, namely, Norwich Pharmacal Company, developed its machinery for automatically casting cocoa butter and glycerine suppositories. It would seem that the market for a small machine is very extensive and I am pretty sure that the machine developed by the Norwich Pharmacal Co. for casting glycerine suppositories could be purchased on a royalty basis from the stated company by any machine manufacturer who might be inclined to develop standard units for this market. In the Norwich machine the molds are filled, chilled, scraped, and opened automatically.

The process of making lipsticks consists of three steps: incorporating in a suitable base the requisite color and perfume, casting the sticks, and flaming and assembly.

The incorporation of color is a milling process exactly like making printer's ink or paint base. The base of fats, oils, and waxes is melted and the coloring material thoroughly mixed in. Any mixing machine is

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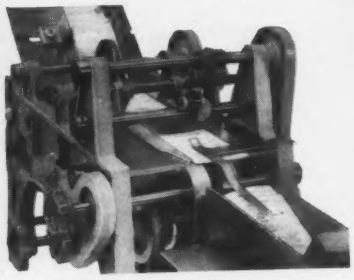

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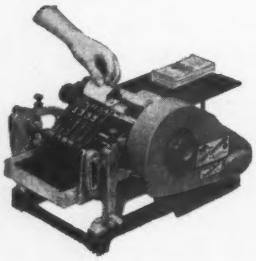

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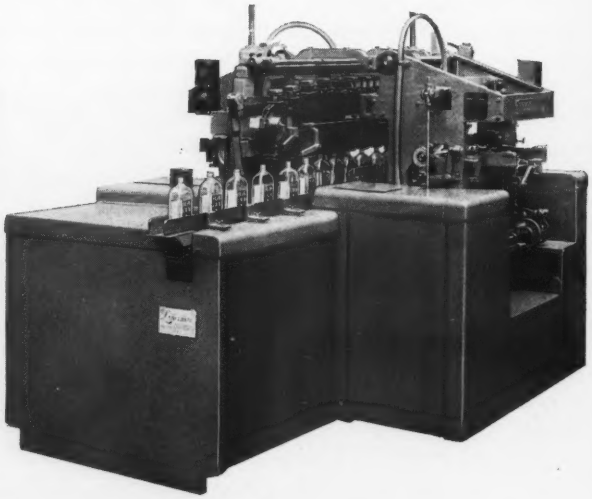

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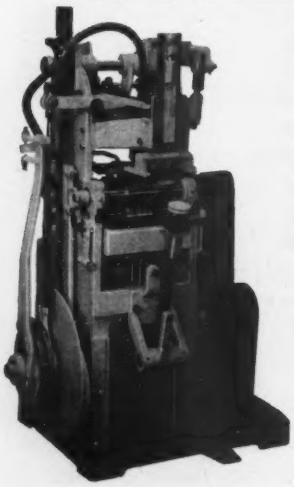

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good for this operation and the Lenart mixer is particularly good because a high degree of milling is simultaneously carried on as the color is mixed with the base. We have not tried one of these machines for lipsticks, particularly, but since the machine can be obtained in sizes ranging from one gallon up, it lends itself ideally to this operation and I should not be surprised if you found that no additional milling was necessary.

The milling operation which is usually carried on next requires some form of high speed mill. We have seen lipsticks milled with every type of mill including roller mills, colloid mills, paint mills, and buhrstone mills. When many different shades are made, the prime requisite in selecting the mill to be used is the speed with which it can be cleaned and in this connection few mills offer the advantages of a roller mill. It might be mentioned in passing that some manufacturers mill the entire batch of lipstick after the color has been incorporated, others incorporate all of the color in part of the base, such as the petrolatum, and mill only this base.

The milled product is then ready for casting. During the casting operation it is desirable to use a thermostatically controlled holding kettle in order to keep the product at a constant temperature. This kettle should be equipped with some mixing device to keep the lipstick from hardening on the sides of the kettle and thus prevent flaking and lumpiness. The question of what to do with the scrapings of the mold is a moot point. Some manufacturers contend that they should not be put back with the original base but should be remade and cast separately. Their contention is that the incorporation of scraps with the original base is likely to result in a grainy stick.

Filling the molds is an important operation because the base should be kept at a high viscosity in order to prevent stratification and separation of color. It is best not to pour the lipstick at random on the molds and allow it to fill the cavities as it will, because there is an instantaneous temperature drop as soon as the lipstick mass is permitted to flow from the holding kettle. It is better to allow the mass to flow directly into the cavities as this will insure sticks without fissures or air holes. A gang type filling machine such as a candy depositor can be employed for this purpose. A candy depositor is nothing but a series of mandrels equipped with individual valves which are fastened to a single operating lever. Such a machine is used for filling chocolate molds and there is no reason why it cannot be adapted for this operation provided your volume is large enough to warrant the use of a gang filler. The molds are usually made of brass but aluminum has been employed. We don't believe that the construction of molds has been extensively studied because standard molds do not have polished cavities and as a result it is necessary to flame the sticks after they are cast in order to give them a smooth surface.

The assembly of the sticks and holders is of course a hand operation and the flaming is done immediately after the sticks have been inserted into the holders. On one occasion we saw for a particular shape stick a mold which was designed so that the holders fitted into the bottom of it and the sticks by this means were cast directly into the holders. We never thought the idea very practical because it seemed to us that about as much time was taken inserting the sticks into the bottom of the molds as normally is required in inserting the cast sticks into the holders by hand.

CELLOPHANE CEMENT

C. L. Hueston, 1998 Glendale Ave., Detroit, Mich. are making a cellophane cement for which much is claimed. The drying speed and the elasticity of the material can be regulated to suit particular requirements and you can obtain samples for experimental uses.

3 STAGE CELLOID MILL

The new Colloid Mill with triple processing action, introduced by The C. O. Bartlett & Snow Company, is said to meet every requirement for high rotor speed, easy feed and discharge of the material, easy dis-assembly for cleaning and easy re-assembly, absence of packing and glands promoting extreme cleanliness, and low motor horsepower per gallon of material processed.

The machine is of the vertical type. Material is fed downward through a receiving funnel and encounters impeller vanes on top of the rotor traveling at 10,800 R.P.M., which force it to the periphery of the rotor at pressures as high as 150 pounds per square inch for some materials.

The rotor, stator and inlet chambers of standard machines are bronze; the inlet funnel is stainless steel; and the housing semi-steel; but machines can be furnished in any special metals or alloys desired. Jackets are provided in the stator and housings for heating or cooling. The machines can be dis-assembled and thoroughly cleaned in from two to three minutes. They are available in four sizes with 4", 6", 9" and 12" diameter rotors. The Bartlett-Snow Laboratory is available for tests and trial runs. Descriptive literature may be secured by writing to The C. O. Bartlett & Snow Company, Cleveland, Ohio.

SEND FOR A COPY

A few of the many types of electric hoists built by the Detroit Hoist and Machine Co., 8201 Morrow St., Detroit, are shown in their new bulletin.

Schutte and Koerting Co., Philadelphia, have three new booklets entitled, "Universal Steam Jet Syphons for Pumping Liquids," Strainers for Oil, Water, Steam, Etc.," and "Rotameters."

A folder has just been published by U. S. Stoneware Co., Akron, O., which explains why roller-type jar mills are safe to handle, easy to use, and economical.

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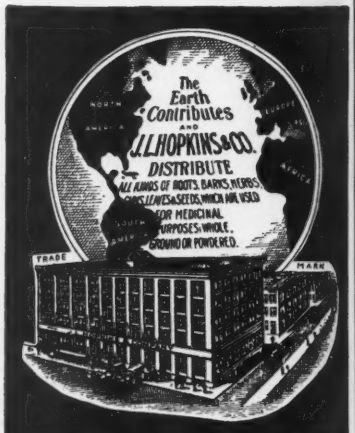

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BROMOSOLV

As a solution to the problem of getting a solvent for bromo acid which is more satisfactory than the customarily used castor oil, Givaudan-Delawanna, Inc., New York, offers Bromosolv. This product is a heavy, viscous liquid containing four per cent. of tetrabromofluorescein in complete solution. Bromosolv is soluble in vegetable oils and waxes, is not soluble in mineral oil or waxes, but is compatible with about twenty per cent. of mineral products in the lipstick mass. It has a very slight odor which is easily masked by perfume and has been compounded to assure maximum stability against the development of rancidity. Its consistency is such that it may replace castor oil in the stick formula without much change in the other components. The product has naturally been tested and found to be free from toxicity or tendency to produce irritation. Lipsticks made with Bromosolv have been exposed to vacuum, elevated temperatures, and long periods of aging without any adverse effect on staining and other lipstick properties.

Use of Bromosolv carries the following advantages. It permits the use of higher concentrations of bromo acid in true solution than have hitherto been possible. Its use eliminates milling of bromo acid with castor oil and it is itself a good grinding medium for other insoluble pigments. Lipsticks using Bromosolv with the higher concentration of bromo acid in true solution give a much deeper and indelible stain. It is non-toxic and non-irritating and its use involves only minor modifications in present formulas.

TANNIC ACID JELLY

In the tannic acid treatment of burns the most important recent development has been the use of concentrated preparations. Whereas originally a 2 or 2½ per cent. solution was considered sufficiently strong to coagulate the exuded protein and so prevent toxemia caused by septic absorption, it has since been found that 10 or 20 per cent. solutions give better results. To prevent mold formation an antiseptic such as mercuric chloride, 1 in 2000, was usually added to the solution.

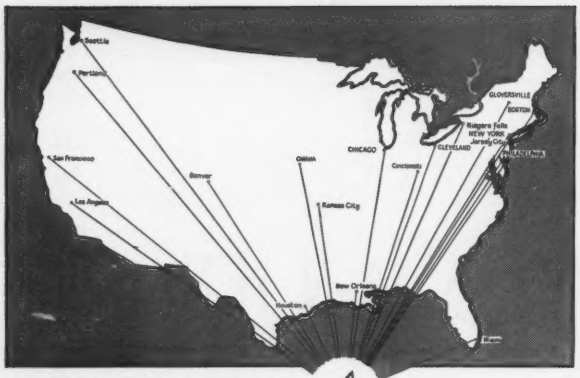
Tannic acid jelly has largely replaced the extemporaneously prepared, or stock solution. The jelly has a water soluble basis and also contains an antiseptic. With the object of devising a formula for a jelly suitable for treating burns on board ship, J. F. and R. M. Heggie tested (*Lancet*, 1940, ii, 391) a preparation consisting of:

Tannic acid	20.0 per cent.
Proflavine sulfate	0.1 per cent.
Procaine	2.0 per cent.

in glycerin-tragacanth base.

Methyl violet, 0.1 per cent., may be substituted for proflavine sulfate. The glycerin-tragacanth base consists of:

"Don't let him give you perfume, get jewelry."



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Compound powder of tragacanth ..... 2.0 per cent.
Glycerin ..... 10.0 per cent.
Distilled water ..... to 100

The preparation is put up in collapsible tubes or, in hospital, stored in wide-necked well-stoppered bottles.

When used on burns completely encircling the fingers or hands it was found that a jelly containing tannic acid had too constricting an effect and in consequence the omission of tannic acid is recommended. Instead, 0.5 per cent. quinine and urea hydrochloride with 1.0 per cent. of gentian or methyl violet, in the glycerin-tragacanth basis, is proposed.

GRAY HAIR

The literature on nutrition associates, with increasing frequency, gray hair with an unknown factor of the vitamin B group. In foxes, rats and dogs, graying and restoration of normal hair color appears to be dependent on withdrawals and additions of a yeast factor in their diets. This factor which is demonstrably different from vitamins B_1, B_2 or B_6 is also found in liver. In fact large doses of the purified known compounds of the vitamin B complex increased graying when the hair-pigment vitamin was lacking. Mention was made of the possible connection of hormones to a loss of pigment in the hair. *Southern Med. J., 33 (1940), 554-556.*

REMOVING HAIR DYE

A dye-removing composition is formed of 3% of 40° Baume nitric acid, 1% hydrochloric acid, 1% oxalic acid, 1% of acetic ether, 0.02% of cholesterol, 3% of diethylene glycol, 1% of sodium formaldehydesulfoxylate and 89.98% of water—*Edmond Soussa. U. S. pat. 2,149,391, March 7, 1939.*

PURGATIVE PROPERTIES

The relation between chemical constitution and purgative properties in the phenolphthalein group is concluded to be due to the lactone bridge with the phenolic hydroxyls playing the part of haptophores permitting the fixation of the molecules on living tissue. While phenolphthalein is very active its isomer 4.4′-dihydroxydibenzoyl-benzene is much less active and diphenylphthalide is entirely inactive. On the other hand, 3-*p*-hydroxyphenylisocoumarin is excessively purgative. It possesses in addition some irritant properties due to the isocoumarin nucleus. If the phenolic hydroxyl is removed or if the lactone bridge is opened the purgative properties disappear; phenylisocoumarin and 4′-β-desoxy-benzoin-*o*-carboxylic acid are inactive. The physiological studies were effected *in vivo* on guinea pigs, the doses of the products varying from 0.05 to 0.50 Gm. per pig. *Buu-Hoi. Compt. rend., 210 (1940), 418.*

CALCIFEROL PREPARATIONS

A summary is given of several years researches conducted at the Danish Apothecaries Society Control Laboratory. One per cent. solutions of calciferol (vitamin D_2) in peanut, almond or olive oil (1 Gm. of oil sol. = 1 mg. calciferol = 40,000 International Units of vitamin D) were stable over 1½ years' storage. In first attempts to prepare tablets, to be of 40 International Units potency (1 mg. calciferol per 1000 tablets), these were prepared according to Formula A: I. Calciferol, 0.001 Gm., precipitated calcium phosphate, 655 Gm., powdered arrowroot starch, 140 Gm. II. Ether, *q. s.* III. White gelatin, about 10 Gm., distilled water, *q. s.* IV. Talcum, 45 Gm. A concentrated dispersion of calciferol in the arrowroot starch was first made. Thirty mg. of calciferol were weighed, dissolved in 50 cc. of peroxide-free ether, mixed thoroughly with a convenient quantity of arrowroot starch, dried a short time at room temperature, spread in a thin layer on an enamel tray. It was then sifted, mixed again and stored in well-stoppered glass bottles. Batches of granules were made by taking the proper aliquot of this stock dilution, mixing with the remainder of the starch needed, then the calcium phosphate mixed in. This mixture was moistened with the gelatin solution, pressed through a sieve and dried in a thin layer at room temperature, finally dried several hours at about 35° C. Talcum was sifted in, and tablets containing 0.655 Gm. calcium phosphate were punched. In variant formulas tested, the gelatin solution for moistening was replaced by alcohol. Granulates were also made of calciferol, sugar, cacao powder and calcium phosphate, moistened with alcohol, and dried a few hours at 30-35° C. Another variant was substitution of petrol ether for ether. Unfortunately, biological tests indicated practically complete destruction of the vitamin in these preparations. Contact with air destroyed the calciferol. Since the oil solution was more stable, its use in preparing granules was tried. With the oil solution (1%) substituted in formula A, bioassays were more satisfactory, but there was still some loss (per cent. of intended potency of fresh tablets was 71%). Another formula was now tried. Formula B: Granules containing 50 cg. of calcium phosphate and 50 International Units of vitamin D were made as follows: Calciferol in oil (1%), 1.25 Gm., powdered cane sugar, 248.75 Gm., Pasta Cacao Deoleata, 250.00 Gm., precipitated calcium phosphate, 500.00 Gm., ether, *q. s.*, spirit, *q. s.* The calciferol in oil was dissolved in about 50 cc. of peroxide-free ether, mixed thoroughly with the sugar and dried in a thin layer at room temperature. Then this mixture was incorporated with the calcium phosphate and the cacao. This composition was now moistened with concentrated alcohol, granulated through sieve No. 5, dried first for 5 hours at room temperature, then 5 hours at about 35°C. and sifted through sieve No. 3. Pastilles were made from the granules with 5% talcum sifted in for lubricant. On bioassay, the per cent. of standard potency of the freshly-prepared pastilles was 112% (deviation within bioassay error). Comparing the effect of different drying conditions and strengths of alcohol, granules were made by Formula B with: (*a*) Alcohol, 500 Gm. per Kg., dried 21.3 hours at room temperature. Found potency: 119%. (*b*) Concentrated alcohol, 400 Gm. per Kg., dried 5 hours at 36° C. Found potency: 87%. (*c*) Dilute alcohol, 350 Gm. per Kg., dried 21 hours at 36° C. Found potency: 104%. Studying the keeping qualities of granules (*a*), (*b*) and (*c*), no significant loss was found in 4-5 months' storage, and other granules and pastilles of Formula B showed no loss in 1 year's storage. When tablets were made by the modified Formula A (using calciferol in oil), and starting at 71% of intended potency, these decreased in two months' storage to a potency of 41% of intended potency, and after 5 months contained only 20% of intended potency. Hence the granules and pastilles made by Formula B, even with dilute alcohol as moistener, were stable if kept in filled, brown glass bottles. Use of the 1% oil solution of calciferol was essential for stability. Tablet formulas containing the pure crystalline chemical lost 70-100% potency.—*H. Lindholm, Arch. Pharm. Chemi, 47 (1940,) 287.*

DORMOVIT HYPNOTIC

Dormovit (furfurylisopropylbarbituric acid) is easily soluble in alcohol, ether, chloroform and lipin; molecular weight 250; melts at 168-170°. The aqueous solution of the sodium salt has *p*H 9.47 and is not changed by boiling for 30 minutes. The substance has a hypnotic effect in rabbits, cats and dogs after oral administration of 80 mg. or intravenous injection of 40 mg. per Kg. body-weight; 75 mg. per Kg. given per rectum in rats, has a hypnotic effect lasting 90-125 minutes. Lethal oral doses are 320 mg. in cats, 350 mg. in rabbits, 360 mg. per Kg. in dogs. Intravenous lethal dose in rabbits is 125 mg. per Kg. Small doses of dormovit protect mice against the lethal effect of a subcutaneous injection of 0.12 Gm. of cardiazol per kg. Hypnotic and narcotic doses have no effects on circulation, respiration and metabolism. Only small amounts of dormovit are excreted unchanged in urine; most of the substance is broken down in the organism.

Dormovit, in oral doses of 0.2-0.4 Gm., is a useful hypnotic in man; its effect lasts for about 7 hours. Unpleasant side actions were not observed. Habituation does not occur, even if used over many weeks. Marked analgesic effects were obtained in combination with dimethylaminophenyldimethylpyrazolone. *K. Zipf. Munch. med. Wochschr., 85 (1938), 365-366.*

Perfumers Shelf

SYNTHETIC BERGAMOT OILS

Due to the present war conditions, shipments of natural bergamot oil from Italy have not been arriving in this country and, therefore, the shortage is so acute that the perfumer has to look to synthetic substitutes in order to replace natural bergamot.

Bergamot oil is produced in only a very small section of the world. In fact, the only supplies come from extensive plantations in southern Calabria in the neighborhoods of Reggio, Melita, Gallico and San Lornezo. The prospect of future shipments of this material is very remote and, naturally, those interested in replacing the natural oil with synthetics or extending their present stock of the true oil are interested in substitutes.

In discussing substitutes for this material, the most important item to be considered is bois de rose and its derivatives which are linalool and linalyl acetate. The natural bergamot oil contains from 36 to 38 per cent. of natural linalyl acetate but the manufacturer has found that acidulation of the bois de rose oil produces a very good material of better price and as well adapted as the linalyl acetate for the formulation of the synthetic product. Therefore, the basis of a synthetic bergamot should consist of one of the three above mentioned items or a combination of all.

Another interesting product which has recently been developed in this market is the acetate of petitgrain. This item, strange to say, imparts to the synthetic bergamot a heavy characteristic which resembles very closely the natural oil. There are also other esters which can be used such as terpinyl acetate and geranyl acetate, which are quite stable and which impart some of the characteristics necessary in the formulation.

The development of the citrus note which is highly important can be obtained by the use of oil of lemon Californian and very small quantities of orange.

In conclusion, therefore, let us say that a combination of the above mentioned materials using acetylated bois de rose as a basis will give a very good imitation of the natural oil and, if some of the true oil is available, it is recommended that it be used at least in the amount of 25 per cent. This product will give excellent results in powders, talcs, toilet waters and soaps, but, in the case of perfumes, it is recommended that the synthetic be mixed with the natural in about 50 per cent. proportion.

"I don't want to be exotic—I just want to smell nice."

A CHRISTMAS WISH

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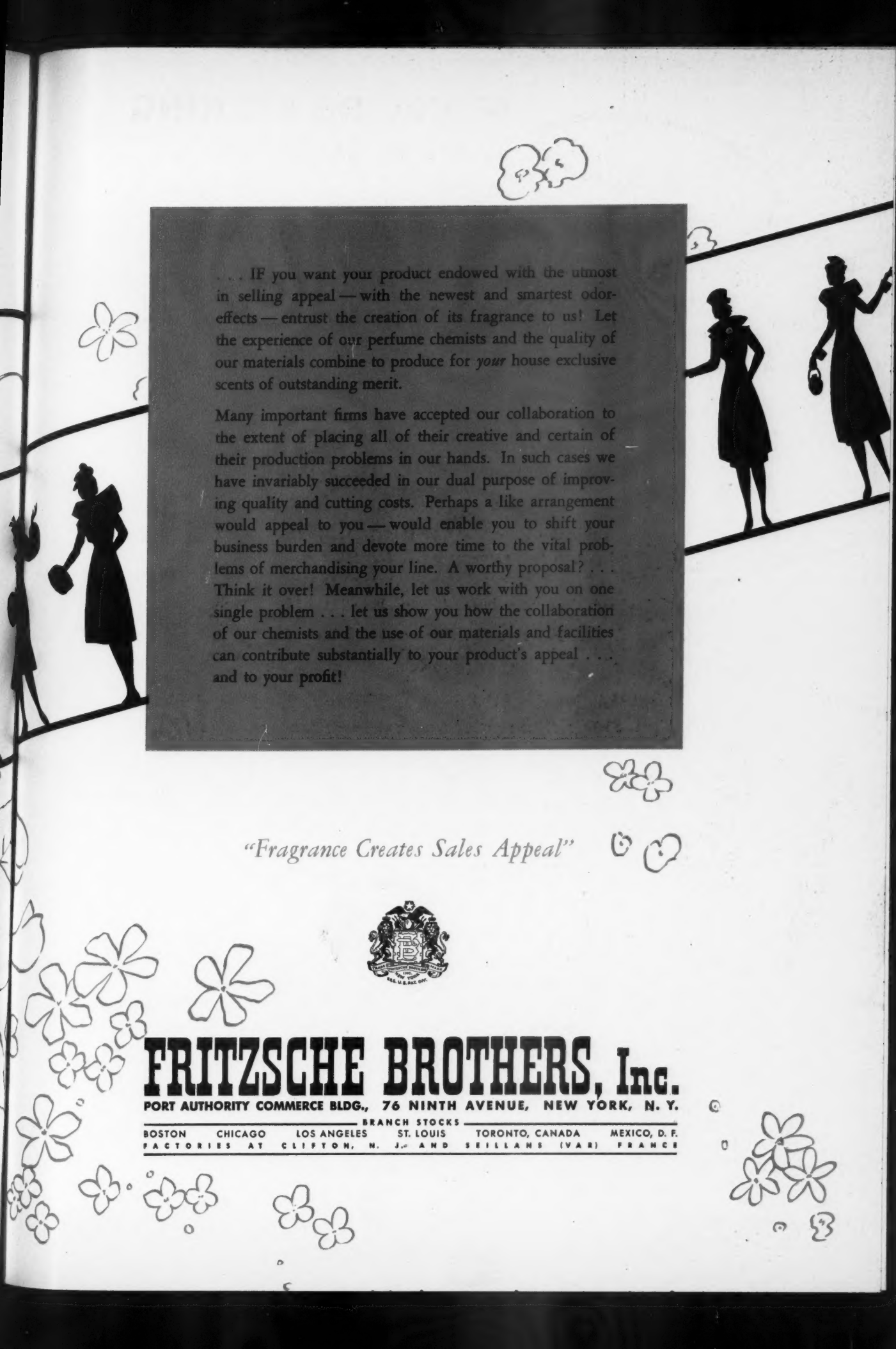

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ESSENTIAL OILS AS PRESERVATIVES

Comparative tests showed that the additions of common natural and synthetic aromatic substances to cosmetic creams retard or inhibit the growth of molds. A complete inhibition of molding was effected on the addition of these aromatic substances to beer wort infected with cultures of *Aspergillus glaucus* and *Penicillium glaucum*. Several tables are given, showing the comparative effectiveness of various essential oils and synthetic aromatics in the suppression of mold growths in emulsified creams.—*E. Shevlyagina* and *R. Rutkovskaya. Masloboino Zhirovoe Delo, 15 (1939), No. 4, 31.*

COBRA VENOM

It is generally agreed that the neurotoxin principle of snake venom is responsible for its pain-controlling action. The activity of cobra venom is apparently related to its high S content. Of the numerous mechanisms by which venom is supposed to control pain, present authors favor this one. Stimulation of motor nerves liberates acetylcholine and it is this substance, and not the nerve itself, which carries the impulse across the synapse to the end organs. Cobra venom contains estrase which destroys acetylcholine preventing the impulse from passing to the responsive tissue and vice versa. After discussing the various preparations of cobra venom and their uses in different types of pain, the authors tabulated the results obtained from it in 65 cases and detailed data are given for 21. An average of 70% were relieved and none suffered untoward effects.—*R. N. Chopra* and *J. S. Chowhan. Indian Med. Gaz., 75 (1940), 69-75.*

VITAMIN K COMPOUNDS

Methylnaphthoquinone or methylnaphthohydroquinone is the most active vitamin K compound known. It is as effective intravenously in an aqueous medium as orally in oil solution. *Per os*, its potency is greater in water than in oil. The phosphate derivative is less active. The sulfate is not as potent and less rapidly absorbed than the phosphate. A new water soluble compound of vitamin K activity is described, 2-methyl-1, 4-naphthylene-dioxydiacetic acid. It has the potency of one unit in 2 mg., melts at 217-218° and is prepared by the action of monochloroacetic acid on methylnaphthohydroquinone in presence of sodium hydroxide.—*S. Ansbacher, Erhard Fernholz* and *M. A. Dolliver. Proc. Soc. Exptl. Biol. Med., 43 (1940), 652.*

TANGAN-TANGAN OIL

Tangan-tangan oil is a good substitute for castor oil, since its laxative efficiency is somewhat better. Tangan-tangan oil, from Philippine *Ricinus communis*, is devoid of the side effect of vomiting sometimes produced by castor oil. Both oils produce after-constipation, but the effect is more frequent with tangan-tangan. Cats are suitable laboratory animals for testing cathartic efficiency of a purgative oil. Olive oil is not purgative when given in the same amount as the usual purgative doses of castor oil. Tangan-tangan oil prepared by cold expression does not contain the highly poisonous ricin with which the oil is associated in the beans. *Romulo Guevara. Rev. Filipina Med. Farm. vol. 30 (1939), p. 87.*

FLUIDEXTRACT OF ERGOT

Fluidextract of ergot was prepared from an ergot of known alkaloidal content by the method of the Dan. Phar. 1933. The samples were stored under various conditions and sodium hydrosulfite (1%) and ascorbic acid (1%) were added as stabilizers. After 1, 2, 4, 6, 10 and 12 months, the contents of ergometrine and of ergotoxine were determined and it was found that only ascorbic acid had a stabilizing effect. The other preparations lost, after 6 months' storage, 38% of ergometrine and 54% of ergotoxine; after 12 months' storage, 51% of ergometrine and 69% of ergotoxine. The sample which contained the ascorbic acid lost 16% of ergometrine and 40% of ergotoxine in 12 months; thus ergometrine was more stable than ergotoxine. *S. A. Schou and M. Tonnesen. Dansk. Tids. Farm., 14 (1940), 49.*

SEXUAL HORMONE PRODUCTS

Preparations for parenteral use having enhanced sexual hormone action are obtained by combining testosterone, androstanediol, androstenediol, 17-methyltestosterone, estrone, estradiol or androstenedione with an aliphatic carboxylic acid, aliphatic hydroxy carboxylic acid or aliphatic alcohol.—*Karl Miescher and Albert Wettstein, assignors to Soc. pour L'Industrie Chimie A. Bale. U. S. pat. 2,173,337, Sept. 19, 1939.*

Bath Salts

(Continued from page 648)

parts of sodium bicarbonate, 75 parts of sesquicarbonate, 53 parts of soda ash, 62 parts of monohydrated carbonate, or 143 parts of washing soda.

As in all effervescing mixtures, individual components must be perfectly dry in order to prevent premature bubbling; dry starch should be used to coat the separate acid and alkaline components and color and perfume should be applied in alcohol without the addition of water.

Oxygen-liberating salts, presumably of tonic action, are based on sodium perborate. This compound will liberate oxygen from its solutions only quite slowly under ordinary conditions. A catalyst such as manganese sulfate or cobalt chloride will permit decomposition to take place rapidly and smoothly.

Citric acid	22.0
Sodium sesquicarbonate	78.0

Sodium bicarbonate	26		
Borax	42		
Tartaric acid	16		
Sodium bisulfate	16		
Sodium bicarbonate	51	60.0	
Tartaric acid	23	28.0	
Starch	26	12.0	
Sodium sesquicarbonate		50.0	17.5
Sodium bicarbonate		32.0	70.0
Citric acid		10.0	12.5
Starch		8.0	....
Borax	34.0		
Sodium sulfate	16.0		
Sodium bicarbonate	25.0		
Citric acid	20.0		
Milk sugar	5.0		
Sodium perborate	52.0	67.0	
Sodium bicarbonate	40.0	31.5	
Citric acid	7.0	....	
Manganese sulfate	1.0	1.5	
Sodium sesquicarbonate		49.0	
Sodium perborate		50.0	
Manganese sulfate		1.0	

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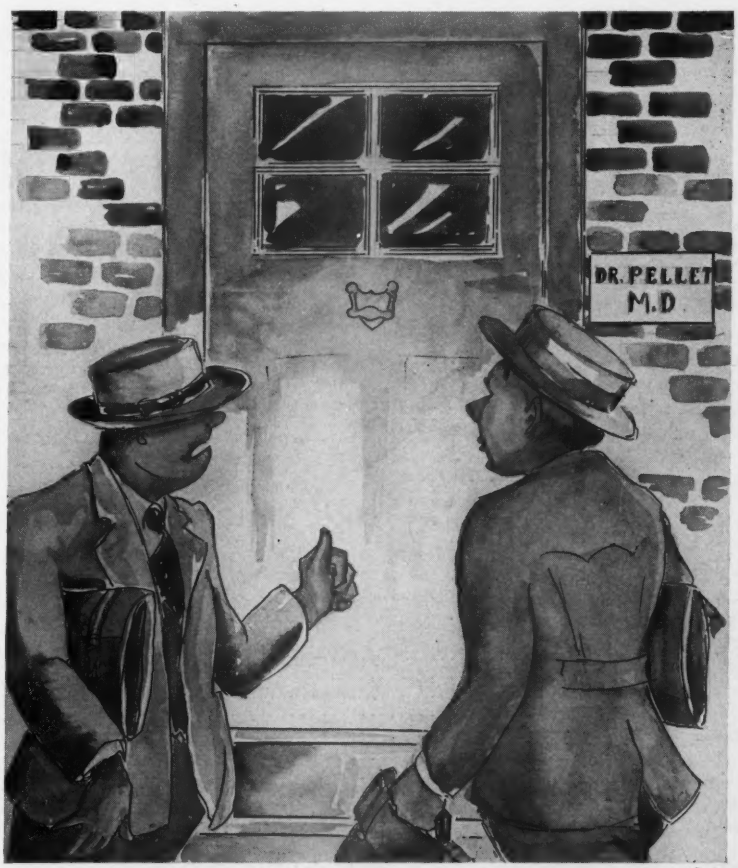
ADVANCING THERAPY

TETANUS TREATMENT

In the course of an outbreak of cerebrospinal meningitis in the Dinka districts in Equatoria province of the Anglo-Egyptian Sudan, Bryant and Fairman observed that patients with tetanus were occasionally brought to Sudan Medical Service dressers in treatment centers established in the infected districts. Some dressers had seen tetanus before and recognized it; others had not. Relations of the sick, if told that the patient had not cerebrospinal meningitis but tetanus, as a rule demanded treatment and lumbar puncture. The treatment was always given by the dresser as for cerebrospinal meningitis by lumbar puncture and injections of sulfapyridine. During the constant patrolling of the epidemic areas the authors saw these cases in treatment centers and administered evipal soluble (evipan sodium), leaving enough of the drug with the dresser to keep the patient quiet or, if necessary, anesthetized for three or four days. All of the twenty-two cases of tetanus recorded here were typical and severe and without treatment most would probably have had a fatal outcome in a day or two. However, under treatment with sulfapyridine and continued or intermittent narcosis with evipal soluble all but five recovered. The authors also state that during the last few years cases of tetanus were occasionally treated with evipal soluble alone. Results have been fair and unexpected recoveries made. Numbers are too small for analysis, but if the patient could be kept alive for five or six days he seemed to have a good chance of recovery. Lumbar puncture was always performed. Recovery in these cases was always extremely slow and wasting was pronounced. In the light of this experience with evipal soluble alone, the authors think that in the cases treated with sulfapyridine and evipal soluble, recovery has been too rapid and mortality too low to be explained away entirely by the muscular rest produced by prolonged narcosis. They suggest that it is possible to save many patients with tetanus in remote places where high temperatures and inaccessibility preclude the use of serum.—*Lancet, vol. 2, p. 263.*

SULFAPYRIDINE AND INFECTIOUS DIARRHEA

Villani used sulfapyridine for the treatment of sixteen severe cases of infectious diarrhea in children from 2 months to 3 years of age. As soon as the vomiting was controlled by elixir of phenobarbital, orange juice and physiologic solution of



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sodium chloride the patients were given boiled skim milk, sulfapyridine and small amounts of kaolin and camphorated tincture of opium. Physiologic solution of sodium chloride by hypodermoclysis, sips of orange juice and physiologic solution of sodium chloride by mouth control the vomiting, which as a rule is caused by the acidosis and dehydration. Patients were also given physiologic solution of sodium chloride enemas for abdominal distention and starch enemas for tenesmus. As soon as vomiting ceased infants were given a lactic acid milk formula and children, who respond rather promptly to this form of therapy, were given cereals, bread, custards and very ripe bananas in addition to their sulfapyridine medication. The author feels certain that in his sixteen cases sulfapyridine was a specific chemotherapeutic agent, as within twenty-four to forty-eight hours of the first dose of the drug the temperature dropped to normal and shortly thereafter the stools returned to normal. There was one death; the sulfapyridine was discontinued because the infant was unable to retain the drug. No serious complications were encountered. The minimal dose of the drug was administered.—*W. Va. Med. J. vol. 36, p. 414.*

ANDROGENIC THERAPY

Huffman reviews the experimental work and the clinical results obtained with androgen therapy in gynecology and states that the effects among twenty-two women who received androgenic therapy parallel those produced in laboratory animals by injections of testosterone propionate. Functional uterine bleeding was inhibited by the preparation. No notable masculinizing changes developed, except occasional temporary hypertrophy of the clitoris. Three patients have been under observation for more than two years. Testosterone propionate caused genital activity to cease in human beings as it has in the adult female rabbits and rats. This effect is the result of pituitary rather than ovarian inactivation. The changes produced are temporary, and the cyclic phenomena of the genitalia are resumed after administration of the drug is continued. When from 350 to 500 mg. of testosterone propionate is injected over a considerable period of time, temporary masculinizing changes, especially hypertrophy of the clitoris, may appear. Inhibition of lactation after testosterone propionate therapy has been observed clinically and microscopically in animals. According to the literature, reproduction is possible and normal children have been born to women who have been treated with the preparation prior to their pregnancies. There is considerable evidence to suggest that androgenic therapy has a place in the treatment of functional uterine bleeding, mastalgias, puerperal breast engorgement and inhibition of lactation. Further investigation of its use in dysmenorrhea and menstrual molimina is indicated. The use of the preparation may perhaps be advantageous in preference to the estrogens in certain menopausal disturbances. *Am. J. Obst. & Gyne, vol. 40, p. 675.*

HISTAMINE AND HISTAMINASE

According to Alexander, evaluation of the therapeutic efficacy of histamine and histaminase for allergic disorders must be tentative for the present. Reported experience shows a rather striking similarity between the clinical effectiveness of the two. Neither appears to be of value for extrinsic allergy as asthma and hay fever, in which an immunologic mechanism is involved. Both are effective in urticaria, angioneurotic edema and physical allergy; that is, intrinsic allergy. This suggests that histamine operates through the production of histaminase. That intrinsic allergy responds to it and the extrinsic form does not leads to the question whether the H substance released by the one is qualitatively the same as that elaborated on contact between allergen and antibody. The question whether H substance is really histamine has been raised frequently and there are indications that the two are not identical. The limiting of histamine and histaminase therapy to intrinsic allergy, which is by far the more intractable type, shows sufficient promise to warrant further investigation. *J. Lab. Clin. Med. vol. 26, p. 110.*

DYSMENORRHEA

A study was made of the use of capsules containing aspirin, 5 grains; phenacetin, 3 grains; propradine hydrochloride, ¾ grain in the treatment of primary dysmenorrhoea in patients whose ages ranged from 14 to 44 years. The combination was chosen because of the value of aspirin as an analgesic, combined with the ease with which it is tolerated and its freedom from depressant action; of phenacetin because of its even more marked analgesic properties, although it is apparently much more depressing; and of propradine hydrochloride as an antispasmodic and decongestant.

The dose was three capsules daily, except in very severe cases, where the patient received one every three hours. Marked relief was experienced, especially where the capsule was given immediately symptoms became evident. The authors hold that this remedy (1) is safe and nontoxic; (2) has an almost immediate effect; (3) produces no nausea or dizziness, and no after effect; (4) does not depress the kidneys, nor influence the regularity or the amount of the menstrual flow; (5) appears to be most effective during the first two days of the period. *G. W. Anlay. Amer. J. Obstet. and Gynec., 1940, 82.*

STROPHANTHUS REPLACING DIGITALIS

Jucker administered strophanthus intravenously in seventy-five cases of decompensated heart of various types, such as those due to valvular disease from rheumatic endocarditis, to myocardial sclerosis or to syphilitic chronic aortitis with an anginal syndrome and to failing of the pulmonary circulation due to sclerosis of the pulmonary artery and acute insufficiency of the heart. The treatment was resorted to after failure of digitalis or in cases of intolerance to digitalis. The initial dose amounted to 0.0001 or 0.0002 Gm. of the drug. The total daily dose did not exceed 0.00025 Gm. in disturbances of the coronary circulation, acute heart insufficiency or grave myocardial alterations complicating infections, and it was 0.0005 Gm. in cases without these disturbances and with hypertrophied heart. The drug was administered every other day or at longer intervals, and the total number of doses varied from four to ten. The treatment was repeated in some cases on reappearance of the symptoms of decompensation three or more months after the first treatment. It was well tolerated in all cases. Circulation and the general condition of the patients improved. Oxygenation of venous blood in valvular disease or of arterial blood in sclerosis of the pulmonary artery improved. Diuresis increased and edema was controlled. Dyspnea and cyanosis were controlled or greatly improved. The anginal syndrome in chronic syphilitic aortitis was controlled. The electrocardiogram became normal in cases of valvular disease. It improved in some cases of myocardinal disease and did not change in syphilitic aortitis. The treatment is harmless, provided it is given in a proper dose and according to proper indications. Certain types of heart insufficiency are associated with cardiac hypersensitivity to strophanthus. The individual sensitivity is determined by the reaction of the patient to small doses of 0.0001 or 0.0002 Gm. of the drug. The author considers acute insufficiency of the heart as an absolute indication for strophanthus therapy. The presence of moderate renal disease or of complicating myocardial sclerosis does not contraindicate the treatment. Addition of dextrose, caffeine or ethylenediamine does not modify the pharmacologic properties of the drug. *Min. Med. vol. 1 (1940), p. 545.*

MALARIA TREATMENT

The German supply of atebrin to India having been cut off by the war, the authors have investigated the toxicity and antimalarial efficiency of crinodora, an acridine derivative manufactured in Italy. After a thorough examination, 44 patients received 0.1 Gm. crinodora in tablet form by mouth three times a day for five days. Their temperature fell and blood examinations revealed an absence of parasites except the gametocytes of *P. falciparum.* In other respects the drug behaved generally like acridine derivatives. It was considered an excellent substitute for atebrin. *R. N. Chopra, R. T. M. Hayler, B. Sen.* and *M. Talukdar. Indian Med. Gaz., 75 (1940), 202-204.*

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READERS'

ROSIN DEPILATORY: We have been having trouble with a depilatory of the rosin type. A formula on this preparation that works, would be appreciated, as well as a lubricant to release molded cakes of this product from the pans. Chicago.

You do not mention specifically the type of trouble you are having with your rosin depilatory so it is difficult to give you detailed information. The following formulas from Chilson's "Modern Cosmetics" are worth trying.

Rosin	52.0	42.0
Yellow beeswax	25.0	37.0
Carnauba wax	....	6.0
Paraffin	17.0	....
Petrolatum	5.0	....
Mineral oil	....	14.0
Perfume	1.0	1.0

Probably the best type of lubricant is either glycerin or mineral oil depending on the formula you use.

HAIR PREPARATIONS: I am interested in obtaining formulas for tinctures of jaborandi, capsicum and mullein. Milwaukee.

Tincture of capsicum can be made by macerating powdered capsicum with four volumes of alcohol and one volume of water and then submitting the whole to percolation. This is the only tincture of the three you are interested in that is mentioned in official pharmaceutical literature, but probably jaborandi and mullein can be made in the same way.

COD LIVER OIL OINTMENT: I would greatly appreciate your sending me a formula for an ointment containing 70% cod liver oil. This ointment should, if possible, resemble a cold cream in color and texture. Brooklyn.

It is difficult to formulate a cream containing this amount of oil along with water since the product is likely to be unstable. In addition, cod liver oil preparations containing water will probably become rancid more quickly than those without water. For this reason we believe you would do well to make a mixture containing 70% cod liver oil, along with enough petrolatum and beeswax to give the proper consistency. To whiten the product one or two per cent. of titanium dioxide may be ground into the ointment. About one-tenth of one per cent. of hydroquinone should be dissolved in the cod liver oil to assist in preventing oxidation.

GLYCERIN AND LEMON JUICE: In the October issue of your valued periodical, an article in "The Compounders' Corner" mentioned a product "Glycerin and Lemon Juice." Could you send me the exact formula for this preparation and would it be advisable to use some glycerin substitute in place of glycerin? Can you suggest any other formula that might be suitable for use in treating chapped hands? Boston.

Apparently this glycerin and lemon juice mixture is made in the same way as the customary glycerin-rose water mixture, namely, equal parts of glycerin and lemon juice are mixed together. However, for commercial purposes a better looking product would consist of equal parts of glycerin and a two per cent. solution of citric acid in water. This would serve the essential purpose of keeping the skin surface in an acid condition, as well as giving the water absorbing powers of glycerin. A preparation of this sort however, must not be labelled glycerin and lemon juice, since it contains no lemon juice. No glycerin substitute need be used.

HAND CREAM: We are trying to make a hand cream according to a certain formula but all we get is a very thick foam with practically no body. We would appreciate any suggestions for overcoming this difficulty. Also will you please advise us how to combine kerosene and castor oil into a homogeneous mixture? As you know, these two do not mix and we prefer marketing a preparation that does not require shaking before using. New York City.

Your major difficulty lies in the fact that you are using more than enough alkalies to combine completely with all the stearic acid. Since 20 parts of triethanolamine are equivalent to approximately 40 parts of stearic acid and 4 parts of potassium hydroxide are equivalent to 20 parts of stearic acid, and since you have only 40 parts of stearic acid in your formula, you have an appreciable excess of alkalies over fatty acid and cannot possibly hope to obtain either a stable cream or lotion. Your stearic acid should be very considerably in excess, and in any event there is too little present in your formula. Triethanolamine should be reduced to 10.0, while stearic acid should be increased to 200.0; this will give you a much more consistent cream and the proportion of stearic acid can be raised or lowered somewhat to change consistency as desired.

It may be possible to combine kerosene and castor oil into one solution by the use of sufficient ethyl ether of diethylene glycol. Make your mixture of these two liquids and then add the combining solvent a few cc. at a time, shaking, until the proper solution is obtained. This may not work but it is worth a trial.

QUESTIONS

TOOTH PASTE FORMULA: I should be very much obliged to you if you could supply me with a formula for the manufacture of a lathering tooth paste. Bogota.

According to Chilson's "Modern Cosmetics" the following is a formula for a soapy tooth paste:

Pulverized neutral white soap	20.0
Precipitated chalk	35.0
Colloidal clay	3.0
Saccharin	0.3
Water	10.7
Glycerin	25.0
Alcohol	5.0
Flavor	1.0

Make a hot excipient of the glycerin and water. Slowly stir in the soap. Add the flavors mixed with alcohol. Finally stir in the sifted dry ingredients. Adjust consistency to suit with chalk. Mill thoroughly. This makes a very foamy paste. A small amount of gum tragacanth may be added if desired.

HAIR-DYE POMADE: We have recently had a few calls for a pomade that when spread on the hair, will darken it. We would appreciate a formula for such a Pomade, if you have one. Philadelphia.

Pomades of this type, which may have been popular in the past, usually contain a lead or silver salt in a cream or ointment base. Action of the sulfur in the hair would lead to the formation of the corresponding metallic sulfide which would darken the hair. These metallic hair dyes, however, are restricted in their use because of the poor shades they give and the possibility of harming the person using them. Another possibility, in which the pomade would not look very well, involves the use of a fair proportion of a harmless water-soluble black dye in a vanishing cream base. This would result in at least temporary coloring of the hair.

CALCIUM CREOSOTATE: Noting the inquiry regarding Calcium Creosolate on apge 467 of the October issue of Drug and Cosmetic Industry, *am giving you the following information which may prove of interest. The patent covering this is re-issue No. 63,965, issued December 1, 1911 to Bridsey L. Maltbie, of Newark, N. J. The brief specification states that it is a combination of beechwood creosolate and calcium hydrate—presumably in molecular proportions.*

The product was manufactured and sold under the name of "Calcreose" by Maltbie Chemical Company of Newark, N. J. Copy of the patent may be had from Commissioner of Patents, Washington, D. C. for ten cents. W. L. Cummings.

CLEANING ARTIFICIAL TEETH: We would appreciate any help you can give us on the preparation of formulas for the following uses in the case of artificial teeth. 1. A liquid preparation which will clean the teeth by soaking over night. 2. A powder for cleaning the teeth manually and 3. A powder to sprinkle on the teeth to hold them firmly in the mouth. Detroit.

Liquid preparations for cleaning artificial teeth by overnight soaking are usually marketed in the form of powders which are then dissolved in the proper amount of water. These powders are based for the most part on trisodium phosphate. A typical mixture would consist of equal parts of trisodium phosphate and sodium carbonate. Denture brushing powder would be similar to a tooth powder except that stronger abrasives and detergents could be used. Thus, a mixture could consist of 70 parts finely powdered silica, 25 parts trisodium phosphate and 5 parts sodium lauryl sulfate. As far as we know, powders for holding dentures in the mouth consist of powdered gum karaya or similar materials.

PERMANENT WAVE SOLUTION: I would appreciate it highly if you could send me a working formula for a low priced permanent wave solution. Pittsburgh.

The standard working formula for a permanent wave solution not containing much excess ammonia consists of from two to four ounces of sodium sulfite, one to two ounces of sodium carbonate, four to six ounces of ammonium carbonate and one quarter of one ounce of sulfonated castor oil per gallon. This is relatively a strong solution supposedly suitable for hair difficult to curl. For coarser hair it may be advisable for you to dilute the solution or shorten the time of heating.

PEARLY HAND LOTION: We are working on a hand lotion formula and would greatly appreciate knowing what chemicals are used to produce pearliness in lotions of this type. Georgetown.

It is not so much the presence of chemicals that produces pearliness in creams, as the absence of others. In other words, a lotion based on stearic acid, and containing a gum will in time develop very distinct pearliness of the type you desire. The presence of definite quantities of mineral and vegetable oils, waxes, fats, etc. will completely prevent the development of pearliness, which is due to secondary crystallization of the stearic acid. Therefore you must decide for yourself whether or not you want pearliness, which will require the preparation of a very simple product or a more complex mixture, probably more beneficial for the skin, but without pearliness.

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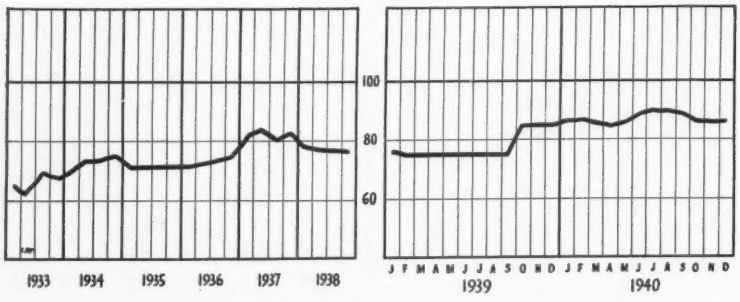
Up

Agar No. 1 10c
Aloin 35c
Arnica flowers 15c
Balsam Peru 5c
Belladonna leaves 90c
Bergamot oil $1.50
Burdock root 5c
Cade Oil 3c
Cananga oil, Rect. 5c
Cardamom oil $2.00
Cedar wood oil 2c
Chamomile Flowers, Hung. 25c
Citronella oil, Ceylon 2c
Java 1c
Clove oil 5c
Coriander oil 75c
Cream tartar 2c
Cumin oil $1.25
Dandelion root 10c
Erigeron 10c
Eucalyptus oil 6c
Fennel oil 10c
Gentian root 1c
Geranium oil, African $3.25
Bourbon $3.25
Guaiac gum 5c
Heliotropin 30c
Hellebore root, black 3c
Henbane leaves 25c
Henna leaves 2c
Horehound herb 2c
Irish moss 2c
Lemon oil, Italian 25c
Linaloe oil, Mex. 35c
Lycopodium 75c
Mace oil, dist. 15c
Malva flowers, blue 10c
Manna, large 30c
small 30c
Musk Tonquin $11.50
Nutmeg oil 15c
Olive oil, Edib. 35c
Origanum oil 20c
Peppermint oil, Nat. 15c
Redist. 40c
Rochelle salt 1½c
Rue oil $1.00
Saffron Valencia $3.00
Santonin $3.00
Sarsaparilla root, Mex. 2½c
Seidlitz Mixture 1⅛c
Senega root 10c
Spearmint oil 10c
Stramonium leaves 8c
Tartaric acid 2c
Thyme oil, red 10c
white 10c
Vanilla beans, Bourbon 25c
Wormseed oil 20c
Wormwood herb 17c

Down

Benzoin gum, Siam 10c
Sumatra 2c
Ipecac root 5c
Kamala 1c
Mastic gum 25c
Menthol, Chinese 10c
Myrrh gum 5c
Rhubarb root HD 2c
Wahoo bark of root 2c
Wormwood oil 15c

25 Cosmetic Raw Materials—Unweighted Price Index. 1926 = 100.

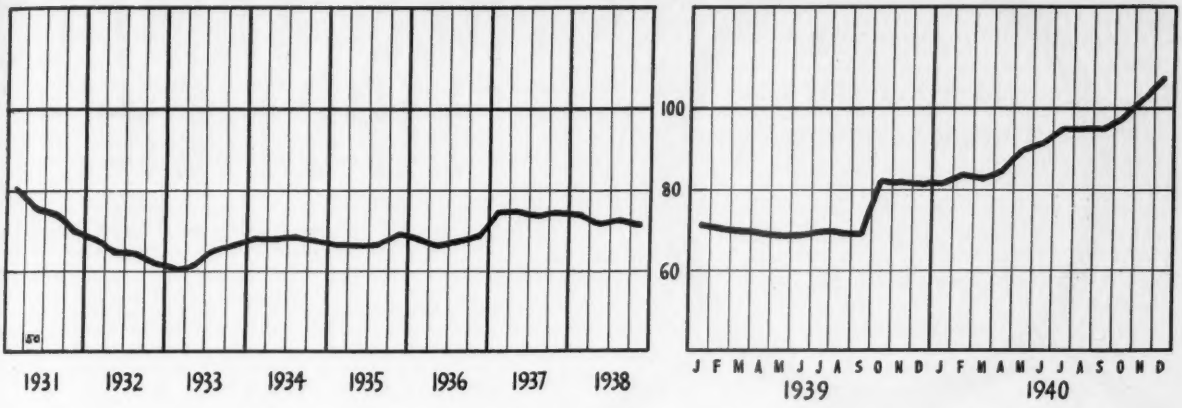


The cosmetic raw materials index also advanced during the current period to 86.9 from the previous 86.5. This was caused by the 5 cent advanced in the spot market price of Balsam Peru. There were no other price changes in this group of commodities. Japanese menthol was as firm for shipment as heretofore although little or no spot market or primary market business was done for American account.

15 Botanicals—Weighted Price Index. 1926 = 100.

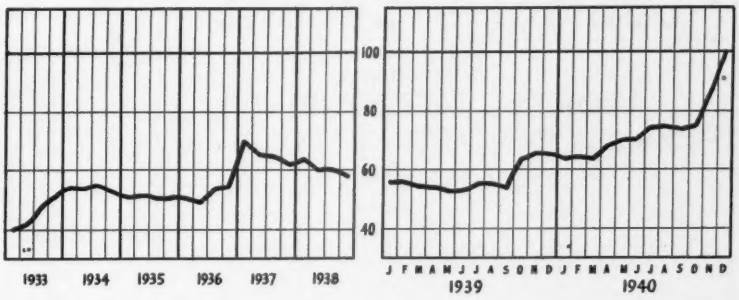
The botanicals index showed another sharp advance during the period from 171.0 to 179.2. Agar was up 10 cents a pound to $1.50; belladonna moved to much higher levels at $1.85; gentian was up one cent a pound to 28 cents. Ipecac declined 5 cents a pound to $1.15 and rhubarb sold lower at 48 cents. The Balkan situation was the main subject of discussion in the trade, commodities from there now being absolutely unobtainable.

50 Raw Materials—Weighted Price Index. 1926 = 100.



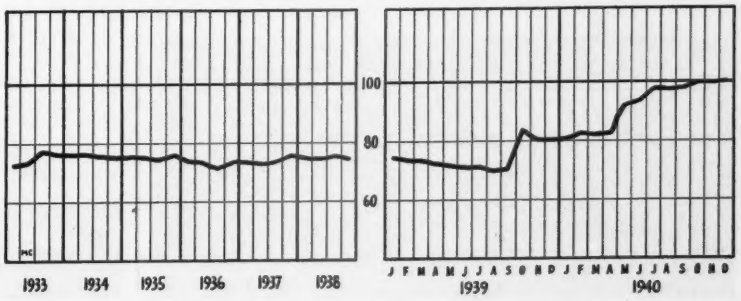
The price index of fifty commodities for December 1940 increased to 107.5 compared with 102.5 in the preceding month. With Slovakia, Hungary and Rumania now under the complete domination of the Axis group, the situation with regard to all raw materials from the Balkans became much worse. Such articles as chamomile flowers, aconite leaves, henbane leaves, and stramonium, are now purely in a nominal position in the spot market. Greek olive oil is unobtainable for shipment. The export of Spanish olive oil is prohibited by Spanish authority. The market for these items will certainly go higher.

15 Essential Oils—Weighted Price Index. 1926 = 100.



The essential oil index was up to 99.9 from the previous 87.8. Bergamot showed another sharp advance to the new high level of $12.00 a pound; citronella Ceylon rose 2 cents a pound to 38 cents; clove oil was up 5 cents to $1.10; eucalyptus rose 6 cents to a new high for the movement at 70 cents; African geranium oil was much higher at $12.25; Italian lemon oil rose some more to be offered at $5.00, and domestic peppermint also advanced 15 cents a pound to $2.80.

15 Medicinal Chemicals—Weighted Price Index. 1926 = 100.



Medicinal chemicals index advanced to 99.7 from the previous 99.3. Mercury declined two dollars a flask to $168 but cream of tartar was up 2 cents a pound to 36¾ cents. As a matter of fact all the tartrates showed advanced during the current trading period. While crude tartar is now being imported from South America prices had to be adjusted since the loss of Spain and Italy as sources.

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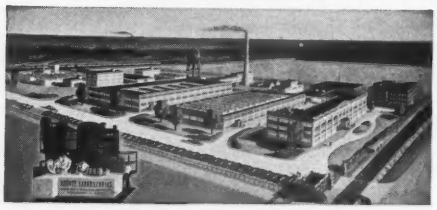

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MENTHOL

There was little demand for spot menthol during the current trading period. This is a situation which is likely to continue for the balance of the inventory period which would make it likely that a small consumer demand will be characteristic through the early part of next January.

There is an exceptional number of small holders of spot menthol at present. The result has been an increase in competition which softened the market for Chinese goods by 10c a pound. This grade is now generally offered here at from $3.25 to $3.30 a pound. There was no change in the price or the situation as regards Japanese menthol. The Japanese are asking as high as $4.00 a pound Cif and seem entirely willing to forego new business from this market until such time as manufacturing consumers are willing to see the situation from their viewpoint.

The future of natural menthol would depend on several factors. A report received from Shanghai indicates that Japan is already exercising some influence on the Chinese source of supply. The extent to which they can eventually gain control over Chinese menthol will, to a large extent, govern the price at which it will be offered for shipment. The Japanese material itself will most likely be affected in proportion to the extent to which shipping in the South Pacific becomes involved.

It is generally conceded that, in view of conditions in general, the spot market price of natural menthol, based on present quotations for Chinese material, is at favorable levels and it would be advisable for manufacturers to affect at least some replacements.

VANILLA

United States imports of all grades of vanilla beans up to September 1st of this year amounted to 1,000,000 pounds. It is generally expected that imports of vanilla beans from all sources will total 1,300,000 pounds by the end of the year. The following import statistics would indicate that this will represent a figure greater than the imports for any calendar year during the past five years:

	Imports *Lbs.*	*Value* *Dollars*
1939.....	891,134	3,133,721
1938.....	1,024,728	2,704,075
1937.....	995,645	2,751,177
1936.....	1,165,424	2,260,079
1935.....	828,625	1,295,413

In view of the heavy imports of vanilla beans this year, manufacturing consumers are asking why prices have been advancing so consistently and why importers have not been offering freely. Where are all these beans? The fact of the matter is that spot supplies of vanilla beans are the lowest in the history of the vanilla business. If any beans are available they are most likely in the hands of extract manufacturers or in perculators. Importers state definitely they do not have them. It is reliably stated that if importers have ten or fifteen per cent. of the total imports still on hand it would be a lot. There are no hidden supplies.

While it is true that the household extract business has fallen off, this slack has more than been taken up by other fields. It is reported that ice cream manufacturers, who have been using synthetic vanilla, are showing a tendency to switch to the natural product.

There is said to be about 500,000 pounds of vanilla beans in Madagascar now. So far it has been impossible to effect shipment of these beans. It is also reported that from 15 to 20 tons of vanilla beans were aboard ship in the harbor of Dakkar prior to the attempted invasion of that port by the Free French movement under the leadership of General De Gaulle. Since the fighting there, no word has been received as to whether the beans were destroyed or whether they are still available for shipment.

One interesting commentary on the situation presented by the large United States imports of vanilla beans is that the price of vanilla does not affect the demand. Low prices do not act as a stimulating influence on demand. In 1935 when the price of Bourbon vanilla ranged between $2.00 and $2.50 a pound, imports totaled 828,625 pounds, whereas in 1940 when Bourbon prices ranged from $6.00 to $8.50 a pound, the imports increased to 1,300,000 pounds.

This is explained by the fact that vanilla is really a luxury article. If general business conditions are good the consumption of vanilla is large, irrespective of the price of the beans. The serious condition of spot vanilla is now aggravated by the fact that this country is undoubtedly in for a sharp upswing in business. The future of the bean market will largely depend on the American business trend, but there is very little likelihood that prices will be easier for some time to come.

TARTARIC ACID

It was necessary for manufacturers of tartaric acid to advance prices 2c a pound during the current trading period. The following schedule is now in effect for prompt shipment only, no contracts: Crystal, granular or powder—barrels, 43¾c per pound; kegs—net 100 lbs., 44¼c per pound.

CAFFEINE

The caffeine market is firm but manufacturers of this item now have the situation well in hand and it does not appear as though there would be any material price advances or that any consumers will have their normal requirements unsupplied. Amsterdam was an important source of supply for caffeine so that just after the invasion of the Netherlands the cutting off of this source of supply disrupted the market for caffeine temporarily.

Caffeine may be produced synthetically from uric acid, or it may be obtained from certain plants, such as tea, coffee, cocoa, mate, guarana, and kila. Prior to the glut of coffee on the market during the depression years, caffeine was being manufactured in Germany from guano, but the synthetic process is costly and of commercial interest only in times of emergency.

Tea is a well-known source of caffeine. Coffee is obtainable in large quantities from South America and other parts of the New World. Low grade coffee or coffee waste can be imported very cheaply for the purpose of extracting caffeine. Coffee contains from 1 to 1.5 per cent. of caffeine. Decaffeination of coffee is also an important source of caffeine. Cocoa contains only a small amount of caffeine (0.15 per cent.) but from 1 to 3 per cent. of theobromine in the bean and 0.8 per cent. in the shell. To produce caffeine from cocoa it is, therefore, necessary to convert the theobromine into caffeine by methylation with methyl sulfate. The most satisfactory method of extraction from defatted cocoa waste was developed by an Amsterdam chemist and it was the loss of this source of supply which caused concern last Spring.

OLIVE OIL

Renewed interest in olive oil was reported in the spot market. Consumers have come to realize that, barring unexpected changes in the international situation, oil will not be forthcoming in volume sufficient to meet normal demand here.

Accordingly, more interest, even at the high prices now prevailing has developed. Of course, some new oil supplies are being received. Limited supplies apparently are moving out of Greece around the Cape and some is being shipped by Syria and Turkey. However, the oil available for export in the two latter countries is not large and cannot make up for other lost sources, it is reported.

Business in denatured olive oil apparently has taken place at $2.40 as the initial asking price.

face powder

an excerpt from an Open Letter

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PEPPERMINT OIL

Peppermint oil is the subject of considerable discussion in the spot market. With the advance of redistilled oil to the $3.00 level, reports are heard to the effect that manipulation at the source is responsible. It is stated that production this year was entirely satisfactory and that export business has been affected by the war. Imports from other countries, particularly Russia, is mentioned as a competitive factor which should affect prices. As a result of these factors, the market, if anything, should be weak, it is said.

It is true that production during the past few years has been entirely up to normal, but it is not true that export business has been seriously affected. In 1938, production of peppermint oil in the five states (Indiana, Michigan, Ohio, Oregon and Washington), amounted to 890,000 pounds. In 1939, there was a decline of 5 per cent. to 845,000 pounds. In 1940, production amounted to 867,000 pounds.

Foreign demand for American peppermint oil fluctuates from year to year, but of late years the average export business amounted to from 40 to 50 per cent. of domestic production. In 1938, exports amounted to 371,866 pounds, valued at $869,560 or $2.42 a pound. This represented 42 per cent. of domestic production. In 1939, exports amounted to 396,073 pounds, valued at $994,060 or $2.51 a pound. This accounted for 46 per cent. of domestic production. During the first nine months of 1940, exports amounted to 257,573 pounds, valued at $722,362 or $2.80 a pound. Considered on the basis of exports up to and including September the total for the 12 month period of 1940 should approximate 343,420 pounds. This would represent 40 per cent. of domestic production.

It will be seen from these figures that the export market for American peppermint oil has held up remarkably well considering conditions abroad. In no case has it declined to the extent where it would depress domestic peppermint oil prices.

Imports of peppermint oil, mainly from Russia, have been increasing materially during the past few years. In 1938 the total imports amounted to only 5,466 pounds valued at $12,422 or $2.27 a pound. In 1939 imports jumped to 35,956 pounds valued at $55,296 or $1.54 a pound. During the first nine months of 1940, 66,902 pounds were entered for consumption at a value of $112,015 or $1.67 a pound. The import duty on peppermint oil is 25 per cent.

It is to be noted that as the total amount of peppermint oil from abroad increased, the price declined. Should this trend continue at the present rate of acceleration it undoubtedly will eventually have an effect on the domestic market.

The conclusions that can be drawn from the above statistics are that domestic producers, finding the demand for peppermint oil at home good, and the foreign market not as yet materially affected, have taken advantage of the situation and advanced prices in line with the general trend of all commodities. Whether or not the current advances will be sustained is a question, but with a general upswing in business ahead it is likely the domestic market can absorb the imported oil and also take up any slack which the prolongation of the war abroad might even eventually develop.

LIME OIL

Exports of essential oil of lime from Mexico to the United States during the period January 1 to September 30, 1940, aggregated 22,049 pounds compared to 19,609 pounds in the corresponding months of 1939. The declared invoice value of exports during the present year was $54,543, compared with $34,244 for the first nine months of 1939. Prices ranging from $1.05 to $4.35 per pound for distilled oil have been declared in invoices certified by the consulate. The totals given above include both distilled and cold-pressed oil. However, production of the latter is still relatively unimportant in the Guadala jara district. Of the five exporters now shipping oil to the United States, only one is able to produce the cold-pressed oil. One large exporter believes that the war in Europe will result in an improved market in the United States for Mexican lime oil.

MERCURY

Total recent purchases of mercury are said to have amounted to approximately 1,100 flasks although the market became quiet during the latter part of the month with only moderate activity now being reported. November is usually a quiet period as buyers are inclined to keep purchases down to a minimum during the inventory period.

Domestic output over the course of the next few months will depend entirely on climatic conditions on the Coast. An extended period of severe weather would undoubtedly have a decided effect on production. Many producing units are located high in the mountains where winter operations are difficult if not impossible.

Although the spot market price of mercury declined somewhat during the period under review the long term outlook is regarded as bullish. Great Britain, which has made fairly liberal purchases in this market since the outbreak of the war may turn to this market for large amounts at any time.

On spot mercury is currently offered at from $168. to $170. a flask as to quantity.

EUCALYPTUS OIL

It has been many years since eucalyptus oil sold at the current high price of from 70c to 74c a pound. The definite trend in the price of this item set in before the war in Europe got under way. A series of droughts and forest fires in Australia not only destroyed large areas of young tree growth but made distillation, because of lack of adequate water supplies, more difficult and more costly. The war has, however, been a contributory cause of the present tendency of eucalyptus oil to advance.

More than 95 per cent. of the eucalyptus oil imported into the United States during the last 6 years has come from Australia, the outstanding world supplier of this product. Imports have ranged from a low of 365,400 pounds, valued at $67,900 in 1935, to a high of 576,200 pounds, valued at $155,900 in 1937. In the year 1936, Japan shipped 45,600 pounds ($8,900); in 1937, 19,600 pounds ($4,400); and in 1938, 2,381 pounds ($2,000), but none since. It is most likely that the eucalyptus oil shipped by Japan originated in Australia as eucalyptus trees are not indigenous to Japan.

Spain is said to have entered the trade in 1936 with 1,200 pounds, valued at $200, and in 1937 increased its participation to 6,200 pounds ($2,300). In 1938, probably because of the Spanish conflict, none came from there, but in 1939 more than 4,400 pounds ($1,100) were recorded as of Spanish origin. In the first 8 months of 1940, Spain supplied 20,100 pounds, valued at $6,700, and Australia 457,000 pounds, valued at $138,900 out of the total imports of 478,300 pounds, $145,900.

From time to time other countries, including the United States, have distilled eucalyptus oil, but Australia has remained the only important source. In 1939, a firm in Rio de Janeiro, with plantations of eucalyptus trees introduced from Australia, commenced extraction of the oil. Although the firm expressed interest in shipping oil to the United States, none so far has been received. The Colombian Government has manifested interest in the possibility of shipping eucalyptus leaves to the United States.

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